1.0 Introduction[2]

Coordinated land-use planning is one of the many trustee responsibilities the U.S. Department of Energy (DOE) has, as a Federal agency holding Federal assets. This *Final Hanford Comprehensive Land-Use Plan Environmental Impact Statement* (HCP EIS) considers several land uses for the Hanford Site planned for at least the next 50 years. As Hanford cleanup progresses through the next 40 years, cleanup Records of Decision (RODs) issued under the *Comprehensive Environmental Response, Compensation, and Liability Act of 1980* (CERCLA) and decisions made through the *Resource Conservation and Recovery Act of 1976* (RCRA) permitting process will impact some areas within the proposed land uses. Likewise, other DOE missions, such as research and development (R&D), might be collocated at Hanford because of DOE's continued Federal presence as the long-term caretaker of CERCLA/RCRA or low-level waste (LLW) disposal sites. Other DOE missions ,such as economic development or even other Federal mandates such as natural resource protection, could also impact Hanford land uses.

As with all Federal activities, where, when, and how quickly Hanford waste sites are remediated and proposed land uses are achieved depends on Congressional funding. It is DOE's responsibility to include in its annual budget request sufficient funds for applicable environmental requirements. The Tri-Party Agreement, which defines the schedule for clean-up activities at the Hanford Site is one source of such requirements, and is itself dependent on Congressional funding. These cleanup activities are an important factor in determining when, or even if, proposed land uses might be fulfilled.

The DOE has prepared this HCP EIS to evaluate the potential environmental impacts associated with implementing a comprehensive land-use plan (CLUP) for the Hanford Site for at least the next 50 years. The DOE is expected to use this land-use plan in its decision-making process to establish what is the "highest and best use" of the land (41 *Code of Federal Regulations* [CFR] 101-47, "Federal Property Management Regulations"). The final selection of a land-use map, land-use policies, and implementing procedures would create the working CLUP when they are adopted through the ROD for this EIS.

Creating this land-use plan benefits DOE in several ways:

- As a Natural Resource Trustee, DOE is encouraged by the Council on Environmental Quality (CEQ) to further the goals of biodiversity and actively manage the land's intrinsic resources.

- Federal law and Executive Orders require that executive agencies hold only that land necessary to economically and efficiently support agency missions.[3]

[2] Vertical lines in the margins like these to the right indicate where changes have been made since the publication of the Revised Draft HRA-EIS in April, 1999.

[3] Specifically, Executive Order 12512, *Federal Real Property Management*, requires executive agencies to ensure the effective use of real property in support of mission-related activities. Also, to stimulate the identification and reporting of excess real property and to achieve maximum utilization, the *Federal Property and Administrative Services Act of 1949*, as amended, requires all executive agencies to periodically review their real property holdings. These reviews identify property which is "not needed," "underutilized," or "not being put to optimum use." Property determined to be excess should be promptly reported to the Federal General Services Administration (DOE 1997b).

- DOE is required to develop a future use plan for the Hanford Site by 42 U.S.C. 7274k (Public Law 104-201, Section 3153, *National Defense Authorization Act for Fiscal Year 1997*).

- DOE's *Land- and Facility-Use Policy* is to develop a comprehensive plan to support the Department's critical missions, stimulate the economy, and protect the environment.

- A land-use plan provides a means for coordinating planning and plan implementation with Tribal governments and local jurisdictions, as well as facilitating site and infrastructure transition and privatization activities.

- A land-use plan formed with cooperating agencies and consulting Tribal governments establishes a planning baseline for the Hanford Site in a regional context, from which DOE and stakeholders can deliberate from, and depart on new future directions.

- Completing this HCP EIS and subsequent publication of the ROD finalizes the Hanford Future Site Uses Working Group (Working Group) process begun in 1992 as scoping for this EIS.

- This land-use plan can be used by the regulators to establish goals for the CERCLA/RCRA cleanup (i.e., remediation) processes (see Table 1-3). Remediation will be conducted under CERCLA/RCRA authority. If the remediation process cannot support the proposed land use within the National Contingency Plan's (NCP's) 10^{-4} to 10^{-6} risk range, then this EIS contains a proposed process for changing the "highest and best use" of the land while maintaining institutional controls (see Chapter 6).

In this EIS, DOE is working with Tribal governments and Federal, state, and local agencies to develop several land-use alternatives – specifically, the potential environmental consequences associated with each alternative – for at least the next 50-year time frame. These individual land-use plans, together with a common set of policy statements, represent the distinct alternatives developed by the cooperating agencies and consulting Tribal governments on this document. The cooperating agencies are the U.S. Department of the Interior (DOI), which includes the Bureau of Land Management (BLM), Bureau of Reclamation (BoR), and U.S. Fish and Wildlife Service (USFWS); Benton, Franklin, and Grant counties; and the City of Richland. The consulting Tribal governments are the Nez Perce Tribe Department of Environmental Restoration and Waste Management (Nez Perce Tribe) and the Confederated Tribes of the Umatilla Indian Reservation (CTUIR).

With the exception of the required No-Action Alternative, each alternative presented represents a Tribal, Federal, state, or local agency's Preferred Alternative. Each alternative is presented independently. Effort was taken to present each alternative with equal measure to encourage public comment.

This CLUP's authority is limited to as long as DOE retains legal control of some portion of the real estate. This EIS does not contain any new mechanisms or preferences regarding the transfer of land, but with input from the cooperating agencies and consulting Tribal governments, this EIS would continue to be useful for considering proposals regarding Hanford lands that might be transferred beyond the control of DOE. This EIS is not focused on land transfer, but rather speaks to the integrated use and management of land and resources independent of who owns the land. Land transfer is a complicated and separate process from the CLUP and once property leaves DOE control, DOE has no more authority over the use of that land unless the

property was conveyed with deed or other legal restrictions. For more information about the process for transferring property, see Section 1.4.3.

The HCP EIS provides environmental review for the following DOE actions:

- Designation of existing and future land uses, and land-use policies and implementing procedures, through the adoption of a CLUP for the Hanford Site.

- Incorporation of site-specific CERCLA RODs into a regional land-use planning process.

1.1 Historic Background

The Hanford Site is a geographically diverse land area in southeastern Washington State. A large area of pristine shrub-steppe habitat, the Hanford Site is bisected by the last free-flowing stretch of the Northwest's Columbia River. In contrast, the Hanford Site is also included on the CERCLA National Priorities List (NPL) of contaminated sites. About 4 percent of the Site is surface contaminated, and 30 percent of the Site overlays contaminated groundwater from the past production of defense nuclear materials.

The Hanford Site occupies 1,517 square kilometers (km^2) (586 square miles [mi^2]) in the southeastern portion of the State of Washington (see text box, *"How Big is Hanford?"* and Figure 1-1, Location of the Hanford Site). Figure 1-2 shows the names and locations of local landmarks that are referenced throughout this EIS. Within the geographic boundary of the Site, there are 36.42 km^2 (14.1 mi^2) of Columbia River surface water and one section (1 mi^2) of land owned by the State of Washington. Established by the Federal government in 1943, the Hanford Site is owned by the Federal government and is managed by the U.S. Department of Energy, Richland Operations Office (RL).

1.1.1 Early Land Use of the Region

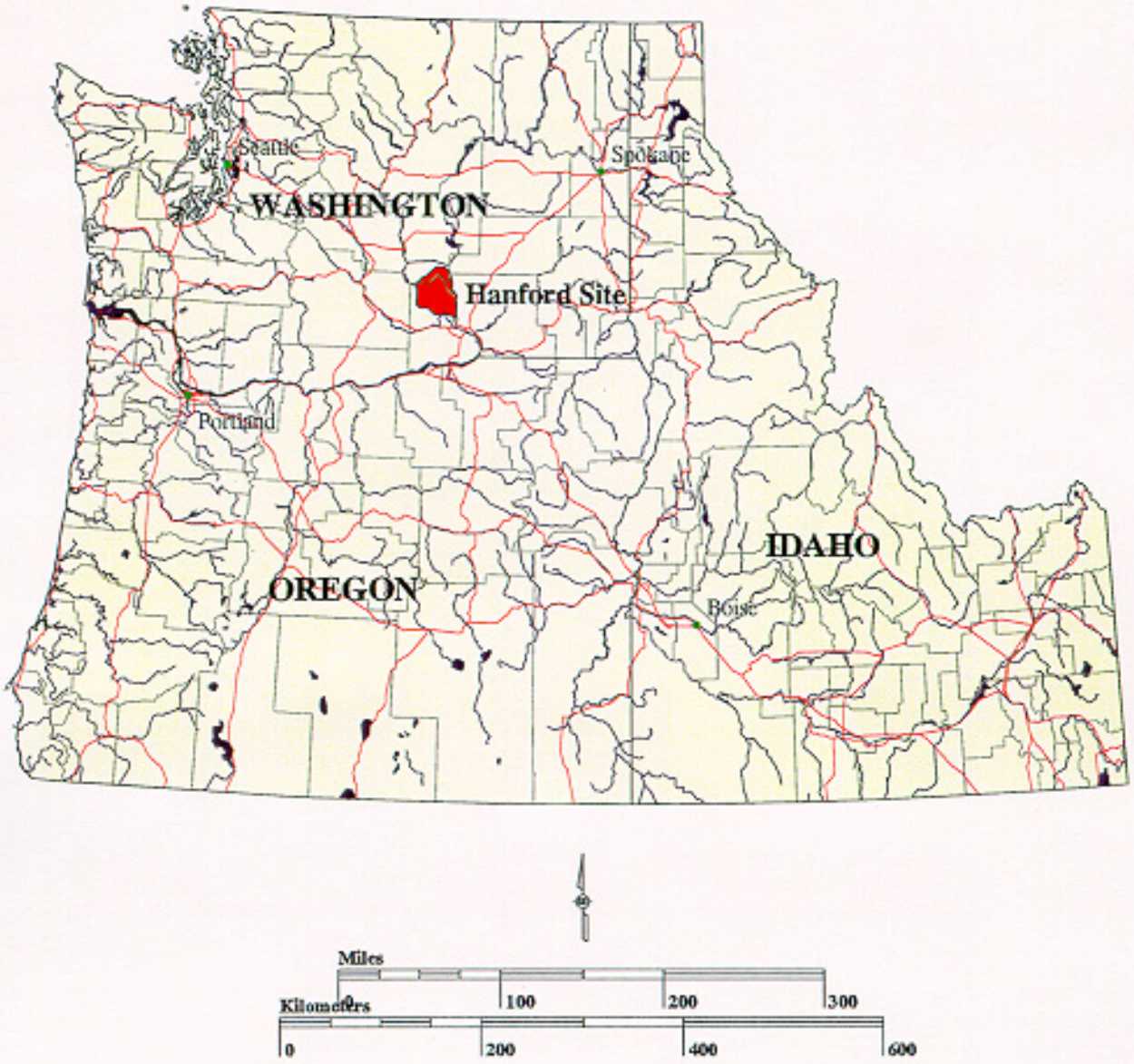
The Hanford Site is located within the Pasco Basin, a unique feature of the Columbia Plateau. The basin is the only area along the mid-Columbia River where the river is not confined within a gorge. Instead, the river is bounded by wide expanses of uplands. During the pre-contact era, these uplands contained abundant natural resources, including native plants, wildlife, and geologic resources. In addition, the Pasco Basin is where the Snake River and the Yakima River join the Columbia River, providing a wealth of riparian areas as well as an excellent means of transportation throughout the semiarid inland northwest. These rivers once contained enormous fisheries of salmon, steelhead, sturgeon, eels, freshwater clams, and other aquatic resources.

How Big is Hanford?

The Hanford Site boundary encloses 1,517 square kilometers (km^2) (586 square miles [mi^2]) based on the newest GIS interpolation of the legal site boundary. Historically the site area of 1,450 km^2 (560 mi^2) was calculated by addition of sections and their subunits based on surveys from the 1800's. Included within the Site is 36.42 km^2 (14.1 mi^2) of Columbia River surface water and one square mile of Washington State land. A square mile is 1,609 meters (5,280 feet) to a side. A square mile is also known as a section, equal to 259.2 hectares (ha) (640 acres [ac]). Typically, in eastern Washington agriculture, four 65-ha (160-ac), center-pivot circle irrigation systems would occupy each section.

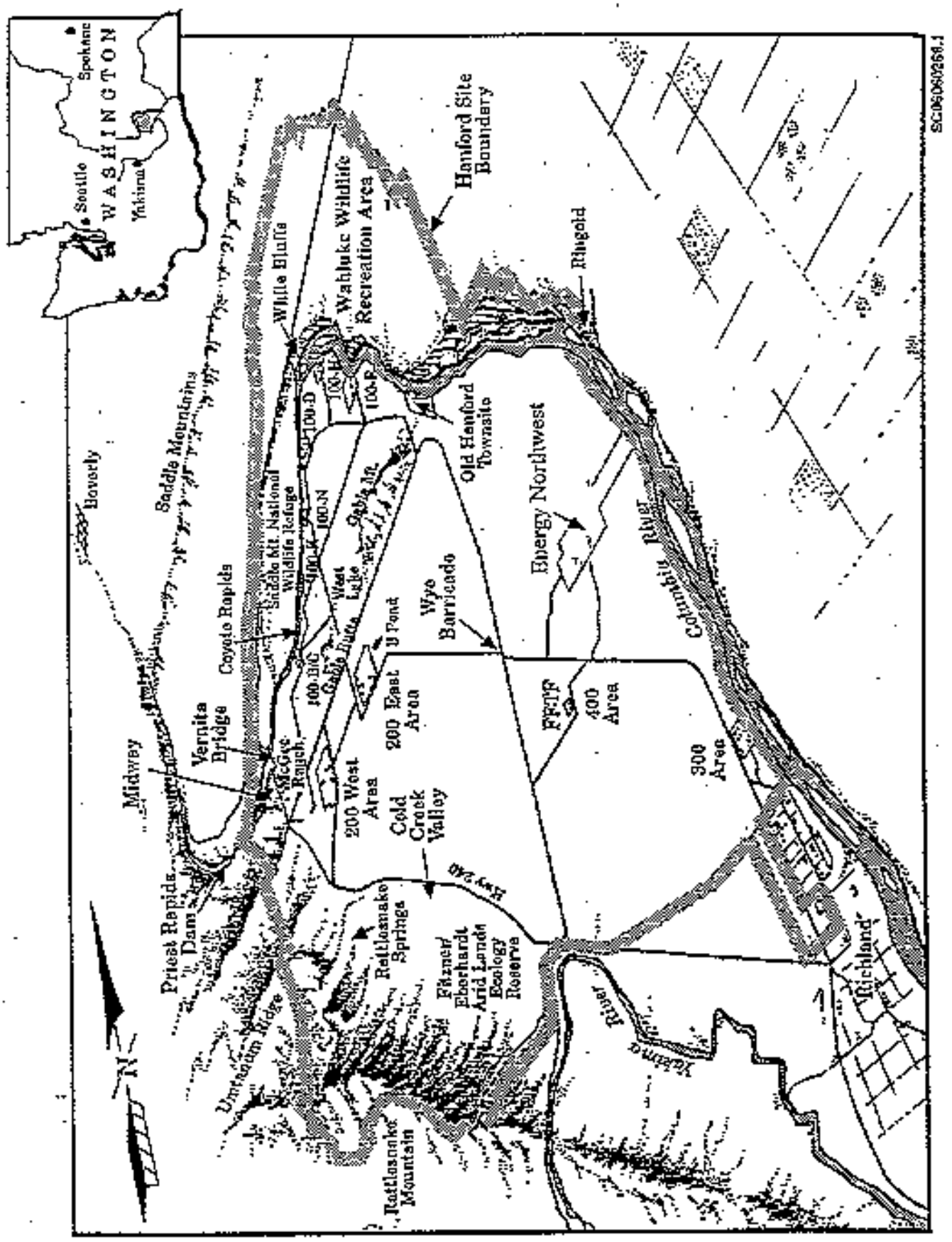
In this document, all measurements are in metric units, followed by the British equivalents. The DOE's documents use metric units as required by Executive Order 12770, Metric Usage in Federal Government Programs"; the *Metric Conversion Act of 1975* (Public Law 94-168, as amended by Public Law 100-418); and various Title 15, *Code of Federal Regulations*.

Figure 1-1. Location of the Hanford Site.



BHErpp 01/13/98 draft_2/region1.aml Database: 03-AUG-1998

Figure 1-2. Hanford Site Local Names and Landmarks.



These physical features of the Pasco Basin made the basin highly attractive to American Indian Tribes. Archeologic evidence has demonstrated their presence in the area for more than 10,000 years. Tribal oral histories confirm that Tribes have been in the region for a very great period of time. The near-shore areas of these rivers contain many village sites, fishing and fish processing sites, hunting areas, plant gathering areas, and religious sites, while upland areas were used for hunting, plant gathering, religious practices, and overland transportation.

For at least the past several thousand years, the Pasco Basin was a major economic hub in the larger Columbia River Basin trading region. The Pasco Basin's location along the main travel corridor between Puget Sound and the Great Plains meant American Indian Tribes in the area were extensively involved in inter-regional economic activity. As a result, the Pasco Basin was relatively densely populated and contained a diversity of Tribes and bands (Figure 1-3).

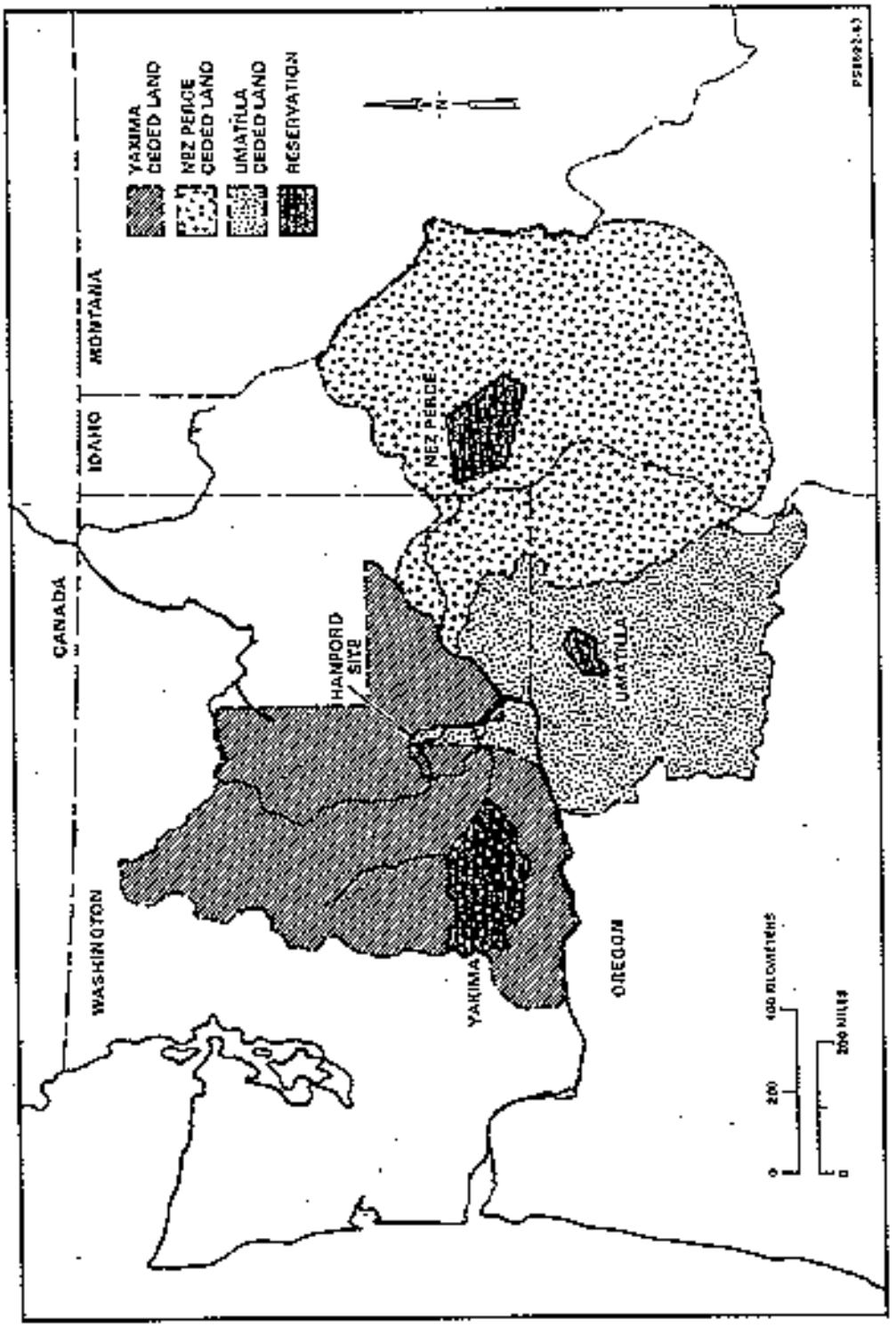
The arrival of the horse in the region around the year 1700 greatly increased the distances that could be traveled by individuals and by Tribes and bands, further increasing the intensity of trade, warfare, and other interaction between groups. The arrival of the horse also initiated a period during which American Indians of the region began keeping large herds of domesticated horses.

The first European-American trappers and traders began arriving in the region around 1800. Their goals were to acquire furs to sell in Asia and Europe. Lewis and Clark arrived in the fall of 1805 to establish the United States' territorial claim to the region. Trapping organizations such as the Hudson's Bay Company and the Northwest Bay Company became increasingly active in the years after the Lewis and Clark expedition. These arrivals were followed by Catholic and Protestant missionaries. Catholic missionaries briefly established a mission at Columbia Point (the confluence of the Yakima and Columbia Rivers). Although the Oregon Trail was established in 1843, and large numbers of non-Indians came to the Northwest via that trail, very few settled in the Pasco Basin, preferring instead to continue on to the Willamette Valley of Oregon.

In 1855, Governor Isaac Stevens, representing the United States government, and Joel Palmer, U.S. Superintendent of Indian Affairs, negotiated treaties with many of the American Indian Tribes in the region (see Appendix A). These treaties called for the relocation of those Tribes to permanent reservations located away from the Pasco Basin. The Tribes retained in their treaties, however, the right of taking fish at all "usual and accustomed" places; erecting buildings for curing; and to hunt, gather plants, and pasture livestock on "open and unclaimed lands" where they traditionally had conducted these activities. To this day, American Indians travel to the Pasco Basin to use its resources.

There were other exceptions to the relocation of American Indians. Peopeomoxmox, a Walla Walla negotiator of the treaty between the United States and the Cayuse, Walla Walla, and Umatilla Tribes, retained in that document the right to operate a trading post where the Columbia River and Yakima River join at Columbia Point. In addition, the Wanapum Band, which did not negotiate a treaty with the United States, remained resident in the Pasco Basin. Nevertheless, over the following 88 years, the Wanapum came under ever-increasing pressure as non-Indian homesteaders seized much of their lands.

Figure 1-3. American Indian Ceded Land and Retained Reservations.



Significant non-Indian settlement of the region began relatively late. In 1888, small irrigation companies and farmer cooperatives began to develop irrigation systems in the Columbia Basin. The agricultural economy of the region saw upswings and downswings, from agricultural price increases during World Wars I and II, drought during the 1920s, and the Great Depression during the 1930s. While, principally, non-Indian farmers lived on the adjacent private lands, members of the Wanapum Band continued to reside on portions of the future Hanford Site that remained in Federal ownership. In 1942, approximately 19,000 people lived in Benton and Franklin counties. Pasco was the largest population center, with approximately 3,900 people (Gerber 1992). The City of Richland had a population of approximately 200 people (Relander 1956).

In the 1940s, almost all of the land that would at some time be considered part of the Hanford Site was being used for crops or grazing. More than 88 percent (about 152,971 ha [378,000 ac]) was sagebrush range land interspersed with volcanic outcroppings, where some 18,000 to 20,000 sheep grazed during winter and spring. Some 11 percent (almost 19,830 ha [49,000 ac]) was farmland, much of it irrigable but not all under cultivation. Less than 1 percent (less than 809 ha [2,000 ac]) consisted of town plots, right of ways, school sites, cemeteries, and similarly used land, most of it in or near the three small communities of Richland, Hanford, and White Bluffs (Jones 1985).

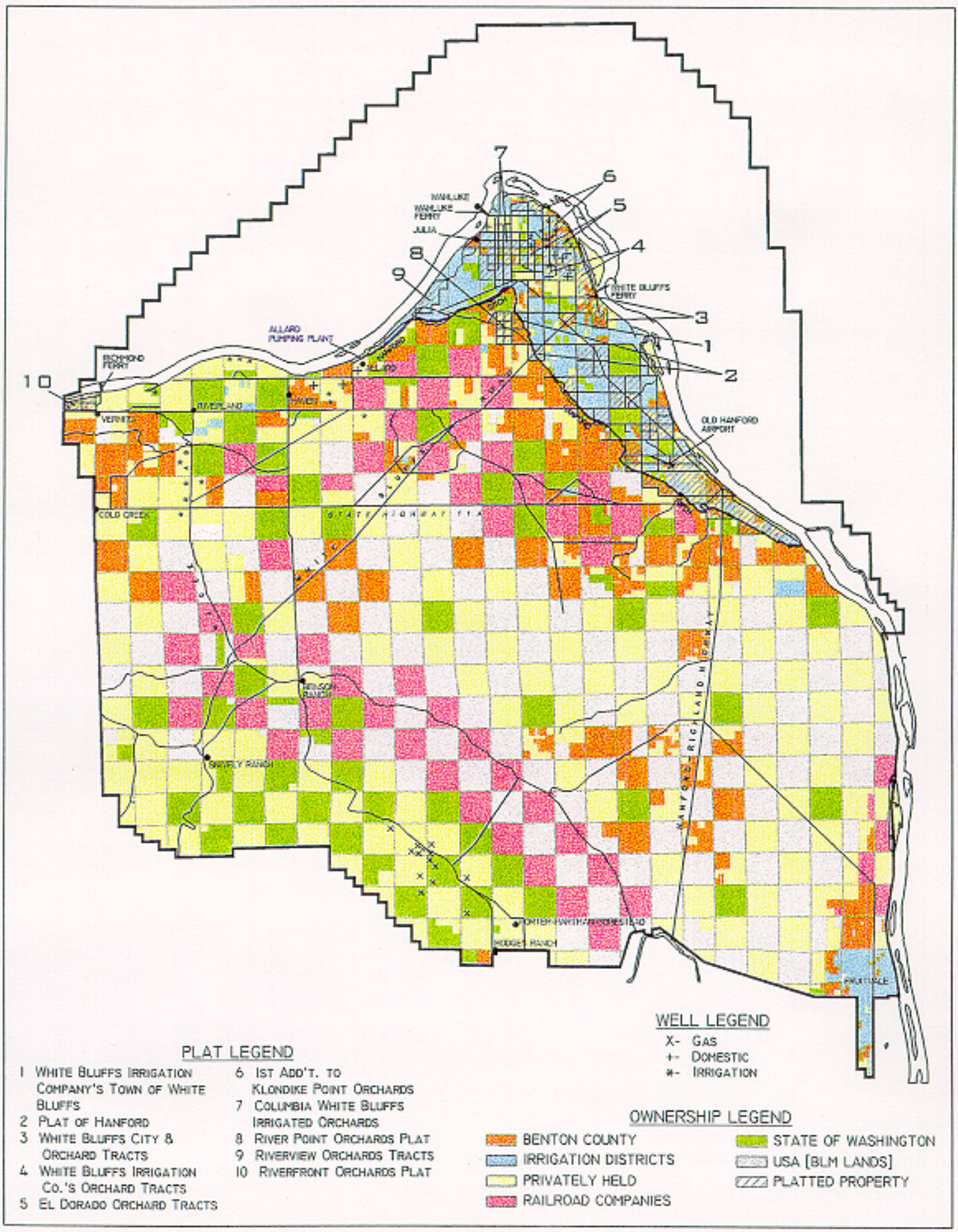
More than one-third of the Hanford area at the time was government-owned. The Federal government owned nearly 28,733 ha (71,000 ac); the State of Washington more than 18,211 ha (45,000 ac); and the five local counties (i.e., Benton, Yakima, Grant, Franklin, and Adams) about 16,592 ha (41,000 ac). More than 91,054 ha (225,000 ac) belonged to private individuals or to corporate organizations, including more than 2,428 ha (6,000 ac) owned by several irrigation districts (Jones 1985). Figure 1-4 provides an example of pre-Hanford Benton County lands in 1943.

1.1.2 Establishment of the Hanford Site

The entry of the U.S. into World War II and the race to develop an atomic bomb led to a search for a suitable place to locate plutonium production and purification facilities. The U.S. Army Corps of Engineers (USACE) selected the site near the towns of White Bluffs and Hanford because of the remote location, good climate, and, most importantly, the abundant supply of hydroelectric power and clean water from the Columbia River. The selection was made in early 1943 and land acquisition proceedings began. The War Department began with condemnation of private lands, followed by appraisals, negotiations, and payments to landowners. Some property owners protested the offered purchase prices and won larger settlements through the courts. Originally, 1,605 km^2 (620 mi^2) were acquired through a combination of withdrawal of lands from the Public Domain and the acquisition of state and privately owned lands. The towns of Hanford and White Bluffs were vacated, the Wanapum were relocated to above the Priest Rapids area, and Richland was transformed into a government town. The U.S. Atomic Energy Commission (AEC) leased an additional 70,000 ha (173,000 ac) as secondary control zones. These secondary zones were released in 1953 and 1958.

For more than 40 years, the primary mission at Hanford was associated with the production of nuclear materials for national defense. Land management and development practices at the Hanford Site were driven by resource needs for nuclear production, chemical processing, Waste Management, and R&D activities. The DOE developed infrastructure and facility complexes to accomplish this work, but large tracts of land used as protective buffer zones for safety and security purposes remained undisturbed. These buffer zones preserved a biological and cultural resource setting unique in the Columbia Basin region.

Figure 1-4. Pre-Hanford Benton County Lands - 1943.



1.1.3 Change in Mission from Defense Production to Environmental Restoration

In the late 1980s, the primary DOE mission changed from defense materials production to environmental restoration. In 1989, DOE entered into the *Hanford Federal Facility Agreement and Consent Order* (Tri-Party Agreement) with the U.S. Environmental Protection Agency (EPA) and the Washington State Department of Ecology (Ecology) (Ecology et al. 1989). This agreement is intended to accomplish the following:

- Define EPA's CERCLA cleanup provisions for remediation of hazardous substances.
- Define the RCRA waste treatment, storage, and disposal requirements and corrective actions for hazardous waste management as administered by Ecology.
- Establish the responsibilities for each agency (DOE, EPA, and Ecology).
- Establish milestones for achieving remediation and regulatory compliance.

The DOE expects that CERCLA/RCRA authority will be used to remediate areas of the Hanford Site consistent with applicable requirements to support "highest and best use" land use. If the remediation process cannot support the proposed land use within the NCP's 10^{-4} to 10^{-6} risk range, then this EIS contains a proposed process for changing the "highest and best use" of the land (see Chapter 6).

Today, the Hanford Site has a diverse set of missions associated with environmental restoration, Waste Management, and Science and Technology. These missions have resulted in the growing need for a comprehensive, long-term approach to planning and development for the Site. Additionally, DOE's *Land- and Facility-Use Policy* (DOE 1994b); DOE Order 430.1, *Life-Cycle Asset Management* (DOE 1995c); and the *National Defense Authorization Act for Fiscal Year 1997* each require the development of a CLUP for the Hanford Site.

To comply with these requirements, DOE has developed a process for implementing a Hanford CLUP, and has integrated this process into this Final HCP EIS (see Chapter 6). The NEPA ROD issued for this EIS would create the CLUP by documenting a final land-use map and adopting final Hanford land-use policies and implementing procedures. Together, these pieces would form the CLUP. The CLUP would consider the role of the Hanford Site in a regional context, and would integrate mission requirements and other factors as directed by the Secretary of Energy (see text box, *"Land- and Facility-Use Policy"* [DOE 1994b]).

DOE's Land- and Facility-Use Policy

On December 21, 1994, the Secretary of Energy issued a *Land- and Facility-Use Policy* for DOE, which contains the following statement:

"It is Department of Energy policy to manage all of its land and facilities as valuable national resources. Our stewardship will be based on the principles of ecosystem management and sustainable development. We will integrate mission, economic, ecological, social, and cultural factors in a comprehensive plan for each site that will guide land and facility use decisions. Each comprehensive plan will consider the site's larger regional context and be developed with stakeholder participation. This policy will result in land and facility uses which support the Department's critical missions, stimulate the economy, and protect the environment."

1.2 The National Environmental Policy Act Process

The *National Environmental Policy Act of 1969* (NEPA) requires consideration of potential environmental impacts associated with Federal agency actions and provides opportunities for public involvement in the decision-making process. In accordance with NEPA requirements, DOE has prepared this Final HCP EIS to help decision makers and the public understand the potential environmental impacts associated with establishing future (for at least

the next 50 years) land uses at the Hanford Site through the adoption of a CLUP and its integral land-use maps, policies, and implementing procedures.

1.2.1 Scope of the Hanford Comprehensive Land-Use Plan Environmental Impact Statement and Comprehensive Land-Use Plan

The DOE received more than 2,000 comments from approximately 233 commenters on the August 1996 Draft HRA-EIS. Response was mixed. Many commenters felt land-use planning was poorly integrated into the public scoping process and the Draft HRA-EIS. Ecology's and EPA's comments centered around disagreements with the CERCLA/RCRA assumptions that were used for the waste volume, cost, and risk assessments. Several key stakeholders (i.e.; the DOI, City of Richland, Benton County, and Nez Perce Tribe) felt that with the magnitude of the land-use decision, they needed to be invited into the process as cooperating agencies.

The DOE realized that, without stakeholder support, the regulators (EPA and Ecology) would not be able to use the Draft HRA-EIS land-use plan, as presented, in terms of factoring in potential future land use into the cleanup decision-making process. The DOE then formally invited local land-use planning authorities and Tribes to be cooperating agencies and consulting Tribal governments. From January through March 1997, DOE worked with the cooperating agencies and consulting Tribal governments to clarify and resolve the issues, still with the intent of incorporating comments on the August 1996 Draft HRA-EIS to produce a final EIS. However, through this consultation process, DOE determined that stakeholders wanted an EIS emphasizing land-use maps as alternatives (as opposed to alternatives representing levels of access independent of the land use[s], as presented in the August 1996 Draft HRA-EIS). The DOE then decided to produce a Revised Draft HRA-EIS in cooperation with, and response to EPA, Ecology, Tribal governments, local governments, and other stakeholder comments.

On April 23, 1999, DOE published the Revised Draft HRA-EIS. A public comment period was held from April 23, 1999, to June 7, 1999. Comments on the Revised Draft HRA-EIS have been incorporated into this Final HCP EIS as appropriate. The DOE's responses to comments are presented in the Comment Response Document of this Final EIS.

The Final HCP EIS evaluates the potential environmental impacts from establishing land uses at the Hanford Site for at least the next 50 years, defers the evaluation of impacts associated with remedial actions to Tri-Party Agreement documents, and includes the entire Hanford Site within the scope of the document. In general, the differences between the Final HCP EIS and the August 1996 Draft HRA-EIS can be summarized as follows:

- This Final HCP EIS focuses on land-use impacts and decisions rather than potential remediation impacts.

- Each alternative in the Final HCP EIS features a Site-wide map designating land uses, whereas alternatives in the August 1996 Draft HRA-EIS focused on individual geographic areas.

- In response to public comment, the Final HCP EIS includes a new DOE Preferred Alternative as well as land-use alternatives developed by the cooperating agencies and consulting Tribal governments.

- The Final HCP EIS contains land-use policies and implementing procedures for integration into the Hanford CLUP (see Chapter 6).

Preparation of the Final HCP EIS is consistent with the *National Defense Authorization Act of 1994*, which requires the development of a future-use plan for the Hanford Site; and is responsive to public comments received during scoping and during public comment periods on the 1996 original draft and the 1999 Revised Draft HRA-EIS. The Final HCP EIS also provides a basis for considering potential future proposals regarding transferring ownership and control of some or all of the Hanford Site such as the Wahluke Slope. As the original 1996 Draft EIS provided for consideration of land use, no additional scoping meetings were required.

1.2.1.1 Public Review of the Revised Draft Hanford Remedial Action Environmental Impact Statement and Comprehensive Land-Use Plan. Once DOE made the decision to reduce the scope of the August 1996 Draft HRA-EIS and issue a Revised Draft, the agency announced it would conduct a 45-day public review and comment period following issuance of the Revised Draft EIS to the public. This public review and comment period, held from April 23, 1999, to June 7, 1999, included four formal public hearings in Portland, Oregon; Richland, Washington; Mattawa, Washington; and Spokane, Washington. The DOE accepted public comments on the Revised Draft HRA-EIS at these hearings and throughout the comment period, and has responded in writing to those comments in this Final HCP EIS.

1.2.2 External Coordination/Involvement in the Preparation of the Revised Draft Hanford Remedial Action Environmental Impact Statement and Comprehensive Land-Use Plan

During the public comment period on the August 1996 Draft HRA-EIS, several agencies and American Indian Tribes expressed an interest in working with DOE to establish alternative visions for land use. To encourage a variety of viewpoints and strengthen the EIS, DOE involved representatives of other Federal agencies, American Indian Tribes, and state and local governments in ongoing planning efforts. Eventually, these groups received formal invitations from DOE to become cooperating agencies and consulting Tribal governments in the preparation of the Revised Draft HRA-EIS.

Since March 1997, DOE has worked with the cooperating agencies and consulting Tribal governments to establish a framework for the environmental analyses presented in this Final HCP EIS. Substantial agreement was reached among the cooperating agencies and consulting Tribal governments on the development of land-use designations and on the format for determining the potential environmental impacts associated with the land uses carried forward in this Final HCP EIS (see Chapters 3 and 5). The cooperating agencies and consulting Tribal governments also worked together to develop the policies and implementing procedures for the CLUP (see Chapter 6). Alternatives that reflect the land-use values and preferences of different organizations were developed because the cooperating agencies and consulting Tribal governments have different resource usage requirements and goals.

1.2.3 Identification of Public Land-Use Values

Through cooperative activities during the past seven years, diverse stakeholder groups have developed statements of values related to the future of the Hanford Site to provide guidance to Congress, the states of Oregon and Washington, DOE, Ecology, and EPA. It is from this guidance that the proposed policies and implementing procedures for the CLUP have been developed. The first set of values was formulated in 1992 by the Hanford Future Site Uses Working Group (FSUWG 1992) and includes the following statements:

- Protect the Columbia River.

- Deal realistically and forcefully with groundwater contamination.

- Use the Central Plateau wisely for Waste Management.
- Do no harm during cleanup or with new development.
- Cleanup of areas of high future use value is important.
- Clean up to the level necessary to enable the future use option to occur.
- Transport waste safely and be prepared.
- Capture economic development opportunities locally.
- Involve the public in future decisions about the Hanford Site.

After the success of the Hanford Future Site Uses Working Group, other similar stakeholder groups were formed, including the Hanford Tank Waste Task Force and the Hanford Advisory Board (HAB). In 1993, the Hanford Tank Waste Task Force reinforced the first set of values by adding the following statements (Hanford Waste Tank Task Force 1993):

- Protect the environment.
- Protect public/worker health and safety.
- “Get on with the cleanup” to achieve substantive progress in a timely manner.
- Use a systems design approach that keeps endpoints in mind as intermediate decisions are made.
- Establish management practices that ensure accountability, efficiency, and allocation of funds to high priority items.

The first major action taken by the HAB in early 1994 was to endorse and adopt both previously issued sets of values. In September 1994, acting on a recommendation from the Cultural and Socioeconomic Committee, the HAB adopted the following additional values (Takaro 1995):

- Historic and cultural resources have value and should not be degraded or destroyed. Appropriate access to those resources is a part of that value.
- Workforce stability and reasonable stability in the demand for public services are important for the affected communities. In decisions on projects and contractors, consideration should be given to affected workforce and population shifts.
- Cleanup and Waste Management decisions should be coordinated with the efforts of the affected communities, to shift toward more private business activity and away from dependence on Federal projects that have adverse environmental or economic impact.
- The importance of ecological diversity and recreational opportunities should be recognized; those resources should be enhanced as a result of cleanup and Waste Management decisions.

- These concerns should be considered while promoting the most effective and efficient means that will protect environmental quality, and public health and safety, now and for future generations.

- Cleanup activities should protect, to the maximum degree possible, the integrity of all biological resources, with specific attention to rare, threatened, and endangered species and their related habitats.

1.2.4 Development of the August 1996 Draft Hanford Remedial Action Environmental Impact Statement and Comprehensive Land-Use Plan

The Notice of Intent (NOI) to prepare the HRA-EIS was published in the *Federal Register* (57 FR 37959) on August 21, 1992. The NOI stated that the EIS would evaluate a range of reasonable alternatives to accomplish the scope of the Tri-Party Agreement within the framework of potential future Hanford Site use/cleanup strategies.

Public scoping meetings were held at four locations in the Northwest: Spokane, Washington, on September 29, 1992; Pasco, Washington, on October 1, 1992; Seattle, Washington, on October 5, 1992; and Portland, Oregon, on October 8, 1992. The public scoping period for the HRA-EIS ended on January 15, 1993.

As discussed in Section 1.2.3, in 1992 the EPA, Ecology, and DOE, in cooperation with other interested parties, organized a process to involve stakeholders in the development of a vision for the future of the Hanford Site. A committee consisting of representatives of labor, environmental, governmental, agricultural, economic development, citizen-interest groups, and Tribal governments was established and became known as the Hanford Future Site Uses Working Group (Working Group). The Working Group was charged with three related tasks (see text box, *"Working Group's Objectives"*). The result of the Working Group's efforts, a report entitled, *The Future for Hanford: Uses and Cleanup -- The Final Report of the Hanford Future Site Uses Working Group*, was issued in December 1992 (FSUWG 1992), and was submitted to DOE as a formal scoping comment for the HRA-EIS.

Working Group's Objectives

- Identify a range of potential future uses for the Hanford Site.
- Select cleanup scenarios enabling the future uses in light of potential exposure to contaminants, if any, after cleanup.
- Probe for convergence among the cleanup scenarios to identify priorities or criteria that could prove useful in focusing or conducting the cleanup.

The August 1996 Draft HRA-EIS was developed to assess the potential environmental impacts, primarily from remediation activities, associated with establishing land-use objectives for the Hanford Site. The land-use objectives were developed by DOE using concepts developed by the Working Group. In 1996, DOE decided to expand the land-use planning initiative into a formal CLUP in the August 1996 Draft HRA-EIS to conform to the Secretary of Energy's new *Land- and Facility-Use Policy* (DOE 1994b) and DOE Order 430.1, *Life-Cycle Asset Management.*

1.2.5 Public Review of the August 1996 Draft Hanford Remedial Action Environmental Impact Statement and Comprehensive Land-Use Plan

The August 1996 Draft HRA-EIS, which addressed impacts associated with remedial actions and land-use planning, was released to the public during the week of August 26, 1996. A public hearing was held in Richland, Washington, on October 17, 1996, and additional public meetings were held throughout the Northwest during the public comment period, which ended December 10, 1996.

1.2.5.1 Major Issues. Numerous public agencies, American Indian Tribes, interest groups, and members of the public provided comments that indicated a diverse range of values and objectives. Several major issues and concerns were identified by commenters during the August 1996 Draft HRA-EIS formal public comment period. The primary issues identified by the commenters included the following:

- Remedial action cost and volume of contaminated material estimates in the August 1996 Draft HRA-EIS were not considered to be consistent with similar estimates made in support of CERCLA documentation.

- Analyses of potential impacts associated with remediation were considered duplicative of the CERCLA process.

- The combination of a land-use plan with remedial action evaluations was confusing. Suggestions were made to reduce or eliminate emphasis on remedial actions and focus instead on those elements of the HRA-EIS pertaining to land-use planning. Widespread support for the development of a comprehensive land-use plan was evident, though not necessarily for the "Hanford Site Comprehensive Land-Use Plan," presented in Volume 4 of the August 1996 Draft HRA-EIS.

- The August 1996 Draft HRA-EIS did not identify DOE's Preferred Alternative for level-of-access controls (i.e., unrestricted, restricted, or exclusive use) for the Hanford Site although there was only one land-use map presented.

- The Comprehensive Land-Use Plan was considered by commenters to be a major Federal action that was not only inadequately integrated in the August 1996 Draft HRA-EIS, but also was out of the scope of the EIS.

- Land-use alternatives, other than the one plan presented in Volume 4 of the August 1996 Draft HRA-EIS, were not evaluated.

- Tribal members' treaty rights and authority were inadequately addressed in the August 1996 Draft HRA-EIS.

- Cumulative impact analyses were considered inadequate.

- The August 1996 Draft HRA-EIS did not adequately address the need of the local community to diversify and strengthen the economy to offset the decline of Hanford Site employment and did not sufficiently emphasize the role that agriculture and related industries play in the region.

- Many commenters requested that the entire Hanford Site be cleaned up to a level that would allow for unrestricted level-of-access use.

- DOE should coordinate with Benton County and the City of Richland to develop an integrated land-use planning process.

- The level-of-access alternatives (unrestricted, restricted, and exclusive) were confusing without an actual land-use designation.

The comments received on the August 1996 Draft HRA-EIS, as well as transcripts from the public hearing are contained in a Revised Draft HRA-EIS Comment and Response Document, which is available for review in the public reading rooms. In addition, a comment

summary is provided in Appendix F of the Revised Draft document. A summary of comments received on the Revised Draft HRA-EIS is included as part of this Final HCP EIS.

1.2.6 Public Review of the Revised Draft HRA-EIS and Summary of Major Issues

On April 23, 1999, DOE published the Revised Draft HRA-EIS. A public comment period was held from April 23, 1999 to June 7, 1999. Public hearings on the Revised Draft HRA-EIS were held on May 18, 1999, in Portland, OR; on May 20, 1999, in Richland, WA; on June 2, 1999 in Mattawa, WA; and on June 3, 1999 in Spokane, WA. Comments on the Revised Draft HRA-EIS have been incorporated into this *Final Hanford Comprehensive Land-Use Plan* EIS (HCP EIS), as appropriate. The DOE's responses to comments are presented in the Comment Response Document of this Final EIS.

More than 400 comment documents were received by DOE, including letters, postcards, questionnaires, and surveys as well as electronic mail. In addition, more than 200 pages of transcripts were generated during the four public hearings.

The DOE considered all comments received on the Revised Draft HRA-EIS. Many of the comments supported particular alternatives, or a combination of alternatives. A significant number of the comments addressed environmental issues, such as the plight of wildlife habitat and the continued preservation of habitat for plants and animals, including the diminishing population of salmon, and the Hanford Reach designation as a Wild and Scenic River. The comments and comment responses are given in the Final HCP-EIS Comment Response Document, and summarized comments and responses are found in Appendix F.

Twenty-eight major topics were identified and given general responses from the hundreds of comments received. More than 200 detailed comments were given individual responses in the Comment Response Document. The major topics are summarized below.

***No-Action Alternative*.** A few commenters gave input regarding this alternative, with two supporting it and two opposing the lack of planning in this alternative.

***DOE's Preferred Alternative*.** Most commenters citing this alternative offered support, albeit with many favoring some modification to further protect the environment. Those opposed cited the lack of economic development for Grant County and keeping the Wahluke Slope under Federal control as the basis for their opposition.

***Alternative One*.** Almost all letters received regarding this alternative were in favor of this alternative, citing the emphasis on preservation and the additional protection that it provides for high value or sensitive ecological areas on the Hanford Site, and the prohibition against agriculture, mining, grazing, and intensive recreational uses that would compromise the ecological and wildlife values presented. The opposing letter expressed the need for economic development.

***Alternative Two*.** Almost all commenters citing this alternative were in favor of it. The primary issue expressed in the supporting comments was the additional protection given to the environment, particularly that afforded to the high value ecological areas and natural and sensitive lands on the Hanford Site. Some commenters expressed the desire for even more protection of the environment, citing this alternative as the one closest to total preservation. The two opposing commenters cited lack of economic development.

***Alternative Three*.** A significant majority of the commenters citing this alternative supported it, particularly the economic development provided to Grant County. These commenters wanted

the land returned to farming. Opposing commenters cited the lack of adequate protection of the shrub-steppe habitat, and the concern that irrigation would undermine the White Bluffs.

***Alternative Four*.** Commenters expressing an opinion on this alternative generally supported it, citing the large amount of preservation. Those opposed expressed concern that there was no economic development.

***National Wildlife Refuge/DOE's Preferred Alternative*.** More than 300 commenters wrote concerning the DOE's Preferred Alternative, with the modification that a National Wildlife Refuge be created/expanded for additional protection of the environment. Six commenters were against this combination, citing as their reasons the USFWS's lack of adequate resources to properly manage the land, and the lack of consideration of the previous use in farming and future economic development.

***Other Combinations*.** More than 100 comments expressed concern or support for parts of alternatives or an additional alternative. A few submitted their own alternative maps. Some commenters addressed the issue of Federal versus local control. A few supported an extension to the public comment period. The comment was made that additional mapping be done to better represent the wildlife population picture. Others suggested that cleanup, not planning, be the focus of the mission at the Hanford Site.

***Preservation*.** Several commenters expressed their support for preservation of the Hanford Site, varying from preservation of the entire Hanford Site, to the addition of the 200 West Area sagebrush to preservation. Many cited the Hanford Reach, the creation of a National Wildlife Refuge, McGee Ranch, May Junction, the islands, the LIGO land, Gable Mountain, Gable Butte, and the sand dunes. Reasons cited were historical, ecological, cultural, biological, and economic.

***Conservation (Mining)*.** A large majority of the commenters expressing a view on this topic said mining could be allowed but only for the necessary materials to support cleanup of the Hanford Site. Some letters described specific areas that should not be mined (primarily the ALE Reserve), while one commenter cited the need for McGee Ranch silt specifically for the cleanup program.

***Conservation (Mining and Grazing)*.** More than 200 commenters were against allowing any commercial grazing on the Hanford Site. Many commenters cited grazing as being incompatible with wildlife protection. The spreading of noxious weeds was attributed to livestock grazing, because hooves tear up the delicate ground cover habitat. There was a concern raised regarding possible plutonium contamination of the livestock.

***Low-Intensity Recreation*.** Commenters gave a variety of views regarding recreation. Boat launches were generally supported, although a boat launch at White Bluffs drew comments for and against. Two commenters opposed any recreation at the Hanford Site. Several expressed the view that only non-motorized vehicles or recreation be allowed on constructed trails, while others supported access for limited recreation such as campsites for paddlers and access for kayakers and rafters.

***High-Intensity Recreation*.** Most of the commenters who expressed views on High-Intensity Recreation were in support of the B Reactor Museum. Some commenters were opposed to any High-Intensity Recreation on the Hanford Site.

***Research and Development*.** Letters received on this land-use designation cited the need for restricting or prohibiting research and development, using only the 300 Area, LIGO, and FFTF, for example.

***Industrial*.** Some commenters addressing this topic recommended limiting industrial development to the 300 Area and 1100 Area, or areas near the Tri-Cities, which would support the industry with infrastructure. A few commenters were against any industrial development at Hanford, while some expressed that timing was important, with cleanup of the site first, then development.

***Industrial-Exclusive*.** Several commenters stated that the area designated for Industrial-Exclusive land use should be reconfigured to represent what was shown in Alternatives One and Two.

***Agriculture*.** Ninety percent of the more than 200 commenters addressing Agriculture were opposed to any agriculture on the Hanford Site, citing the possible endangering of the health of the Columbia River from irrigation runoff, the potential damage to the White Bluffs from irrigation, the need for preservation of the shrub-steppe habitat for wildlife, and the possibility that agriculture on the Hanford Site would be bad, perceptually, for all Washington State agriculture. The commenters in support cited the need to support world food production, schools, and the rural area in Grant County.

***Policy*.** Several letters were received addressing payment in lieu of taxes (PILT), expressing support for DOE to give Grant County PILT; others would like the PILT based on lost opportunity instead of current land use. Commenters also reiterated the need for continuation of the cleanup mission, the need to consider human health and safety, and the need to better address environmental justice by expanding farming opportunities on the Wahluke Slope.

***Procedure*.** Several letters addressed the membership of the Site Planning Advisory Board, wanting to add regulators and Tribes as sovereign nations, and to limit counties involvement. Several commenters expressed the opinion that the Secretary's announcement in April 1999 of the DOE's Preferred Alternative prejudiced the outcome. Commenters also wanted a document name change, a change in timing, and cultural reviews and natural resources for land-use planning.

Plan. Some commenters addressed the comprehensive land-use plan, citing a variety of items. These included the concern that "management by committee" is too risky, thanking the DOE for keeping an open process, lack of impacts from industrial development, the recommendation that planning should be seven generations out, and concerns regarding the sensitivity of LIGO to noise and vibration.

Public Involvement. Several letters cited the commenter's appreciation for the opportunity to comment, positive feedback on multiple public hearings, and complimented DOE and the Cooperating Agencies on the quality of the document and the work that went into preparing the document.

Salmon and Steelhead. All letters addressing salmon were in support of protection of salmon and salmon habitat and salmon recovery efforts, and this extended to other anadromous fish, such as steelhead, as well.

Hanford Reach. More than 100 letters were received supporting protection of the Hanford Reach, citing the importance of the salmon spawning habitat and the welfare of the eagles and other wildlife that eat the salmon. Concern was expressed for the erosion of the White Bluffs, and the effects of regional agricultural growth on spawning habitat.

***Tribal Rights*.** Several commenters expressed their concern that Tribal rights be honored by the DOE. Many expressed an opinion that no grazing of any type should be allowed on the

Hanford Site. Also supported was the protection of cultural and religious sites, working with the Yakama Indian Nation, and consideration of an option to deed stewardship back to the Tribes.

***Wild and Scenic River*.** Several commenters supported a Wild and Scenic River designation for the Columbia River flowing through the Hanford Reach, citing protection of the river and the riverbanks. A few of those opposed the designation were concerned for future local needs, such as water rights.

***Habitat*.** Many commenters were in favor of setting aside land for conservation and preservation of habitat, noting that the wildlife needs protection. Many of the commenters mentioned the valuable shrub-steppe habitat, which is home to many species, including the sage sparrow, desert butterflies, and species of snakes, other reptiles, and amphibians. A few commenters did not support wildlife habitat, noting that shrub-steppe is only weeds, or that wildlife can coexist with farming.

***Wahluke Slope*.** Many commenters addressed the Wahluke Slope, with more than half against any farming there. Other commenters supported farming, or an impartial study of all the potential uses of the land.

***Split Record of Decision*.** Over 180 commenters supported a split ROD in the interest of moving the designation of a wildlife refuge forward, without waiting for cleanup of the site to be completed.

1.2.7 Summary of Changes Made in Response to Public Comment

Based on the public comment received, the following changes have been made to the DOE's Preferred Alternative:

- All Conservation (Mining and Grazing) has been changed to Conservation (Mining).
- The National Wildlife Refuge designation (from Alternative One) has been extended to include the ALE Reserve, the Riverlands, and McGee Ranch; and all river islands not in Benton County. The Preferred Alternative clarifies that the refuge would be an overlay wildlife refuge (without a transfer of title from DOE), and that DOE retains the right to mine the ALE insert for cover materials.
- A railroad right-of-way through the Riverlands portion of the proposed Refuge would be given status as a preexisting condition and included in the proposed USFWS permit to manage the Refuge.
- The White Bluffs town-site (from Alternatives One and Three) has been added to the Preferred Alternative map as Low-Intensity Recreation to serve as the White Bluffs Memorial.
- The Low-Intensity Recreation dots (comfort stations) along the river which could eventually serve as anchor points for a river trail from Richland to Vernita Bridge have been moved to ensure that they have both river and road access.
- A High-Intensity Recreation triangle (from Alternative Three) has been added to the Preferred Alternative map near Horn Rapids Park on the Yakima River.

In addition to changes made to the Preferred Alternative, and the identifying of Alternative One as the environmentally preferable alternative, many other changes were made to the document updating items, refining analyses, and correcting errors.

1.2.8 Biodiversity in the National Environmental Policy Act Process

In January 1993, the CEQ issued a report titled, *Incorporating Biodiversity Considerations Into Environmental Impact Analysis Under the National Environmental Policy Act* (CEQ 1993). This report was designed with the following objectives:

- Provide an overview of major issues related to biodiversity
- Outline general concepts regarding biodiversity analysis and management
- Describe how biodiversity is addressed in NEPA analyses
- Provide options for agencies undertaking NEPA analyses that consider biodiversity.

The CEQ report indicated that physical alteration, as a result of changing land use, is the most profound cause of biodiversity loss. When natural, undisturbed lands (resembling much of the land at the Hanford Site) are converted to industrial, residential, agricultural, or recreational uses, ecosystems are disrupted and biodiversity is diminished. The CEQ report further states that, "Beyond the direct removal of vegetation and natural landforms in local areas, development of sites for human use fragments larger ecosystems and produces isolated patches of natural areas. Activities such as timber harvesting and grazing also may fragment natural areas, but more important, they result in simplification of ecosystems."

On February 11, 1999, the President issued Executive Order 13112, *Invasive Species*, intended to prevent the introduction of invasive species and provide for their control and to minimize the economic, ecological, and human health impacts caused by invasive species. The Order, which is applicable to each Federal agency whose actions may affect the status of invasive species, establishes an Invasive Species Council made up of the Secretaries of various Federal agencies, and also calls for the formation of a stakeholders' Invasive Species Advisory Committee to provide information and advice to the Council.

Each disturbance factor on a given tract of land weakens the native plant community, causing potentially catastrophic and accelerated change in landscape components. Therefore, any activity proposed for a site that disturbs the vegetation and soil surfaces of that site should be examined for its effect on invasive weeds and consequences to site biodiversity. If such disturbance activities do occur, it is important to consider how the effects of the disturbance would be managed, before the action takes place. Specific actions can be taken to help prevent the introduction and/or spread of invasive weeds onto the Wildlife Refuge areas of the Hanford Site. For example, equipment being moved onto the Refuge could be steam-cleaned and washed free of vegetation and soil debris at an offsite location before being placed onsite to remove invasive plant seeds and reproductive parts. Additionally, Hanford road activity should be monitored and immediate management action should be taken, when necessary, to prevent invasive species from becoming established along roadsides.

It is the goal of DOE to ensure that the Hanford Site lands are managed in a way that allows biodiversity to be considered prior to finalizing any land-use or land-management decision. To further the biodiversity goal, DOE contacted the Interior Columbia Basin

Ecosystem Management Project (ICBEMP)[1], and provided the Geographic Information System (GIS) database developed for this EIS as a contribution to that project.

1.2.9 Environmental Justice in the National Environmental Policy Act Process

On February 11, 1994, the President of the U.S. issued Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*. This Executive Order mandates each Federal agency to make environmental justice part of the agency mission. To the greatest extent practicable and permitted by law, Federal agencies must identify and address disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority populations and low-income populations.

As stated in the President's February 11, 1994, memorandum to Heads of Agencies that accompanied the Executive Order, "Each Federal agency shall analyze the environmental effects, including human health, economic, and social effects, of Federal actions, including effects on minority communities and low-income communities, when such analysis is required by NEPA. Mitigation measures outlined or analyzed in an environmental assessment, EIS, or ROD, whenever feasible, should address significant and adverse environmental effects of proposed Federal actions on minority communities and low-income communities." The memorandum and Executive Order ensure that minority and low-income communities will have a voice in the development and implementation of any Federal action that might adversely affect those communities.

In addition, the memorandum and Executive Order indicated that all Federal agencies were to be proactive in identifying and, to the extent practicable, mitigating any potential disproportionately high and adverse impacts on minority and low-income communities that could result from proposed Federal actions. In order to implement the provisions of Executive Order 12898, the *U.S. Department of Energy Environmental Justice Strategy* (DOE 1995a), was prepared. Guidance provided in this publication, as well as CEQ's *Environmental Justice Guidance under NEPA* (March 1998) and EPA's *Guidance for Incorporating Environmental Justice Concerns in EPA's NEPA Compliance Analyses* (April 1998), were used to the extent practicable in the HRA-EIS.

1.3 National Environmental Policy Act and Other Environmental Reviews

Past land-use commitments, based on other NEPA documents, as well as CERCLA RODs addressing remediation, have had a direct impact on the development of the land-use alternatives presented in this Final HCP EIS. Table 1-1 summarizes the Hanford-related EISs

[1] The Interior Columbia Basin Ecosystem Management Project is a Federal land- and ecosystem-management plan commissioned in 1993. The plan affects 100 counties in seven states (including all of eastern Washington and eastern Oregon), and includes more than nearly 22 million ha (54 million ac) of private property. Federal agencies involved are the BLM, National Marine Fisheries Service, Forest Service, and the EPA. Much of the plan deals with water. The plan also proposes aggressive ecosystem restoration practices in order to better control fire, insect outbreaks, and noxious disease spread. Over 75,000 comments (mostly form letters) have been received on the project. In June 1998, the U.S. House Appropriations Subcommittee on the Interior said that ICBEMP should be stopped, its field offices closed, and its studies turned over to the appropriate Federal agencies (TCH 1998a). If the project is stopped, either by Congressional action or lack of funding, the thousands of pages of studies and ideas that have been produced by the project will be given to Federal land management agencies such as the Forest Service.

and RODs and shows the relationships these documents have to land-use planning. Table 1-2 summarizes the regional *State Environmental Policy Act of 1971* (SEPA) EISs. Table 1-3 summarizes CERCLA RODs.

The restrictions posed by approved CERCLA RODs were taken into consideration in the development of the land-use alternatives in this Final HCP EIS. Conversely, the land-use alternative selected for implementation in the ROD for this EIS would be useful for remediation decisions yet to be made in other areas of the Hanford Site. The EPA, Ecology, and DOE consider land-use designations in a given area when determining cleanup levels. If the desired "highest and best use" land use cannot be attained because of remediation-linked technical or economic constraints, or if the remedial action required to achieve that land use would cause unacceptable-unavoidable impacts, then the land use designation of this EIS would be amended using the policies and implementing procedures in Chapter 6 to the next "highest and best use" land use. If required by the CERCLA ROD/RCRA Permit, a deed restriction would be filed with the local land-use jurisdictional agency to conditionally implement the land use.

1.3.1 Interim Actions

During the preparation of this EIS, several outside parties have made proposals to DOE regarding future uses of portions of the Hanford Site. Such proposals undergo NEPA review to determine whether they are major Federal actions, or if they have significant environmental impacts that would require preparation of EISs. This is consistent with the CEQ's regulation in 40 CFR 1506.1(b), "Limitations on Actions During the NEPA Process."

The Hanford 1100 Area and the Hanford railroad southern connection (from Horn Rapids Road to Columbia Center) have been transferred from DOE ownership to Port of Benton ownership in order to support future economic development. Land use of the 1100 Area and the railroad southern connection would remain Industrial, as proposed in all alternatives of this EIS. The DOE prepared an environmental assessment that resulted in a finding of no significant impact (FONSI) on August 27, 1998, transferring the 1100 Area and the Southern rail connection to the Port of Benton (DOE/RL EA-1260). The Port officially took ownership and control of the "1100 Area" (consisting of 318 ha [786 ac], 26 buildings, and 26 km [16 mi] of rail tract) on October 1, 1998, and is currently studying the feasibility of reconnecting the Hanford main rail line to Ellensburg, Washington, as it was in the 1970s, as an alternative route for Yakima Valley rail traffic flowing between the Puget Sound and the Tri-Cities. Although the 1100 Area is no longer under DOE control, it is included in this EIS to support the local governments with their SEPA EIS analyses of the Hanford sub-area of Benton County under the State of Washington's Growth Management Act.

Energy Northwest (formerly known as the Washington Public Power Supply System, or WPPSS) has requested DOE approval of a sublease of a portion of the land they lease from DOE north of the 300 Area. This sublease would be for siting, construction, and operation of an aluminum smelter. Land use of the Energy Northwest-leased land would remain Industrial, as proposed in all alternatives of this EIS. The environmental effects of the proposed sublease and aluminum smelter were being considered in DOE/EA-1259, which was suspended due to lack of response from the proponents.

Table 1-1. NEPA Reviews Affecting the Hanford Site. (5 pages)

NEPA EISs	Purpose	Status	Potential Mission Impacts on Hanford	Relationship to Land-Use Planning
Double-Shell Tanks for Defense High-Level Radioactive Waste Storage, Hanford Site, Richland, Washington (DOE/EIS-0062, April 1980)	To complete construction and operation of 13, 1-million gallon double-shell waste tanks. These tanks would be used to manage defense high-level radioactive wastes resulting from the chemical processing of spent nuclear fuel in the 200 East Area.	The ROD was published in the *Federal Register* on July 9, 1980.	The double-shell tanks were constructed and are currently in operation.	Committed the 200 Areas to continued Waste Management (Industrial-Exclusive use).
Decommissioning of the Shippingport Atomic Power Station, Hanford Site, Richland, Washington (DOE/EIS - 0080, May 1982)	Dismantle and remove all fluids, piping, equipment, components, structures, and waste to a waste disposal facility.	The ROD was published in the *Federal Register* on August 19, 1982.	The Shippingport Atomic Power Station Waste was disposed at the Hanford Site.	Committed the 200 Areas to continued Waste Management (Industrial-Exclusive use).
Operation of PUREX and Uranium Oxide Plant Facilities, Hanford Site, Richland, Washington (DOE/EIS - 0089, February 1983)	This EIS analyzed the environmental effects of DOE's proposal to resume operations of the PUREX and Uranium Trioxide chemical processing plants.	The ROD was published in the *Federal Register* on May 16, 1983.	In 1990, DOE determined that the PUREX Facility would no longer operate. The plant has been shutdown, deactivated, and readied for decontamination and decommissioning (D&D). Operation up until 1990 resulted in discharge of liquid effluents to the ground in the 200 East Area.	Committed the 200 Areas to continued Waste Management (Industrial-Exclusive use).
Disposal of Hanford Defense High-Level, Transuranic and Tank Wastes, Hanford Site, Richland, Washington (DOE/EIS-0113, December 1987)	Examined the potential impacts for final disposal of existing high-level, tranuranic, and tank waste stored at the Hanford Site.	The ROD was published in the *Federal Register* on April 14, 1988.	Committed to dispose of double-shell tank waste, cesium and strontium capsules, retrievably stored and newly generated transuranic waste in the 200 Areas. Also committed to construct and operate facilities associated with high-level waste vitrification; construct and operate the WRAP facility for transuranic soil waste, and a grout facility for LLW.	Committed to Waste Management (Industrial-Exclusive use) in the 200 Area. Many of the tank waste issues were superseded by the *Tank Waste Remediation System EIS* (DOE/EIS-189).
Decommissioning of Eight Surplus Production Reactors at the Hanford Site, Richland, Washington (DOE/EIS-0119, December 1991)	Evaluated decommissioning alternatives for the eight surplus plutonium production reactors at the Hanford Site.	The ROD was published in the *Federal Register* in September 1993.	The DOE determined that the reactor blocks for the eight plutonium reactors will be kept at their present sites for up to 75 years until their radiation level lowers through natural decay. The reactor blocks would then be moved to the 200 Areas for burial.	Commits to restrictive land use of the 100 Areas surrounding the reactors until 2068. Constitutes a future committed land use, Waste Management (Industrial-Exclusive use), for the 200 Areas.

Table 1-1. NEPA Reviews Affecting the Hanford Site. (5 pages)

NEPA EISs	Purpose	Status	Potential Mission Impacts on Hanford	Relationship to Land-Use Planning
Columbia River System Operation Review Environmental Impact Statement (DOE/EIS-0170, November 1995)	To develop Bureau of Reclamation (BoR), U.S. Army Corps of Engineers (USACE), DOE, and Bonneville Power Administration (BPA) management strategy for multiple uses of the Columbia River System.	The ROD was approved on March 10, 1997. This was prepared by the BPA, USACE, and the BoR.	May control Columbia River flows.	May limit land use along the Columbia River (Low-Intensity Recreation use).
Tank Waste Remediation System, Hanford Site, Richland, Washington (DOE/EIS-0189, August 1996)	This EIS addressed management and disposal of the contents of 177 high-level radioactive waste tanks and cesium and strontium capsules.	The ROD was published in the *Federal Register* on February 27, 1997.	The DOE would implement the preferred alternative to retrieve, separate, vitrify, and dispose of the tank waste. The low-level fraction of the separation process would be disposed of onsite in subsurface vaults. The high-level fraction would be disposed of offsite at the potential geologic repository. A decision on the cesium and strontium capsules was deferred.	Commits the 200 Areas to Waste Management (Industrial-Exclusive use) during the retrieval, separation, and vitrification process. It also constitutes a long-term commitment of the 200 Areas for onsite disposal of LLW.
Waste Management Programmatic Environmental Impact Statement (DOE/EIS-0200, May 1997)	This EIS is a nationwide study that examines the management of five types of radioactive and hazardous waste: tranuranic, hazardous waste, high-level waste, and low-level and low-level mixed waste.	*Federal Register* notice announcing change in scope of PEIS (narrowing to Waste Management alternatives) 1/24/95. Eleven regional public hearings held on DEIS (10/17-11/14/95). Public comment period extended through 2/19/96. ROD for treatment and storage of tranuranic waste (63 FR 3629, 1/23/98). ROD for treatment of non-waste water hazardous waste (63 FR 41810, 8/5/98). ROD for storage of High-level Radioactive Waste (64 FR 46661, 8/26/99. Planning additional RODs.	Alternatives considered include centralizing or regionalizing the waste at one or two sites. Those sites that have the largest volumes of a given waste type generally were considered as sites for treatment, storage, or disposal.	A decision to centralize the waste could commit the 200 Areas to Waste Management (Industrial-Exclusive use).

Table 1-1. NEPA Reviews Affecting the Hanford Site. (5 pages)

NEPA EISs	Purpose	Status	Potential Mission Impacts on Hanford	Relationship to Land-Use Planning
Idaho High Level Waste and Facility Disposition Environmental Impact Statement (DOE/EIS-0287)	This EIS is a site specific EIS tiering from the *Waste Management Programmatic Environmental Impact Statement* (DOE/EIS-0200, May 1997 and the *Department of Energy Programmatic Spent Nuclear Fuel Management and Idaho National Engineering Laboratory Environmental Restoration and Waste Management Programs Environmental Impact Statement* (DOE/EIS-203-F).	In preparation.	Calcined wastes would be shipped to Hanford for vitrification under an alternative in the EIS.	Area in the Central Plateau would be required to stage the wastes before and after treatment.
Programmatic Spent Nuclear Fuel Management and Idaho National Engineering Laboratory Environmental Restoration and Waste Management Programs (DOE/EIS-0203, April 1995)	EIS evaluated programmatic alternatives to managing spent nuclear fuel until 2035. This EIS did not evaluate the final disposition of the spent nuclear fuel.	The ROD was published in the *Federal Register* on June 2, 1995. An amended ROD was published in the *Federal Register* on February 28, 1996.	According to this ROD, Hanford production reactor fuel would remain at the Hanford Site pending ultimate disposition. Fast Flux Test Facility (FFTF) fuel will be sent to the Idaho National Engineering and Environmental Laboratory (INEEL). The amended ROD reduced the number of shipments of sodium-bonded fuel from Hanford to the INEEL from 524 to 12.	This decision commits to onsite storage of spent fuel in the 200 Areas until as late as 2035.
Safe Retrieval, Transfer and Interim Storage of Hanford Tank Wastes, Hanford Site, Richland, Washington (DOE/EIS-0212, October 1995)	EIS evaluated alternatives for addressing near-term safety issues in the Hanford Site priority watch list tanks. Accumulation of flammable gas in three tanks had been identified as a safety issue.	The ROD was published in the *Federal Register* on November 21, 1995.	Construction of a replacement Cross-Site Transfer System (pipeline) for moving waste from the 200 West Area to the 200 East Area. Construction of a waste retrieval system in one tank and continuation of mitigation actions to control flammable gas.	This decision creates infrastructure support to tank waste management in the 200 East Area, and commits the new cross-site transfer system pipeline (Industrial-Exclusive use).
Storage and Disposition of Weapons-Usable Fissile Materials Programmatic Environmental Impact Statement (DOE/EIS-0229, November 1996) *Surplus Plutonium Disposition Environmental Impact Statement* (DOE/EIS-0283)	DOE/EIS-0229 evaluated alternatives of facilities for plutonium disposition. Included conversion of bomb components into plutonium oxide, immobilization of surplus plutonium in glass, and mixed oxide fuel fabrication. Site-specific decisions would be made in DOE/EIS-0283.	The ROD for DOE/EIS-0229 was published in the *Federal Register* on January 14, 1997. The Notice of Intent for DOE/EIS-0283 was published in the *Federal Register* on May 18, 1997. The Draft EIS was released in July 1998, and a supplement to the Draft EIS was released in May,1999.	May result in plutonium or highly enriched uranium storage in the 200 West or 400 Areas. Under EIS-0283, the SRS is the site chosen for siting the facility for weapons-useable plutonium disposition.	The 400 Area would remain as Industrial use, with the exception of one to two buildings being used for nuclear materials storage (Industrial use).
Plutonium Finishing Plant Stabilization Environmental Impact Statement (DOE/EIS-0244, May 1996)	To reduce potential health risks and environmental risks associated with 3,800 kg (8,400 lbs) of plutonium within the Plutonium Finishing Plant.	The ROD was published in the *Federal Register* on July 10, 1996.	Stabilized forms of plutonium would be stored within vaults at the Plutonium Finishing Plant pending ultimate disposition.	Commits the 200 West Area to long-tem storage of plutonium and other transuranic materials (Industrial-Exclusive use).

Table 1-1. NEPA Reviews Affecting the Hanford Site. (5 pages)

NEPA EISs	Purpose	Status	Potential Mission Impacts on Hanford	Relationship to Land-Use Planning
Management of Spent Nuclear Fuel from the K Basins Hanford Site, Richland, Washington (DOE/EIS-0245, January 1996)	Evaluated alternatives for spent nuclear fuel stored in the 100-K Area Basins to reduce risk to public health and the environment.	The ROD was published in the *Federal Register* on March 15, 1996.	Irradiated fuel will be removed from 100 K-Basins, treated, and sealed in canisters and stored in the 200 Area. Sludge from the K Basins will be disposed of in existing double-shelled tanks or grouted and packaged for disposal in the 200 Areas.	Commits the 200 Area to the storage of the K Basin fuels and conversion of sludge. Future uses must accommodate restoration after 105-K fuel storage basins are remediated (Industrial-Exclusive use).
Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High Level Radioactive Waste at Yucca Mountain, Nye County, Nevada (DOE/EIS-0250) In preparation.	Would evaluate the suitability of a geologic repository (e.g., Yucca Mountain at the Nevada Test Site) for the disposal of commercial and defense high-level radioactive waste.	The Notice of Intent (NOI) was published in the *Federal Register* in August 1995. The Draft EIS was published in July 1999.	The Yucca Mountain site would accept up to 7000 metric tonnes (7,700 tons) of vitrified defense waste from Hanford and other DOE sites.	Until the Yucca Mountain facility is licensed by the Nuclear Regulatory Commission, high-level radioactive waste and spent nuclear fuel would be stored in the 200 Areas (Industrial-Exclusive use).
Disposal of Decommissioned, Defueled Cruiser, Ohio Class, and Los Angeles Class Naval Reactor Plants Environmental Impact Statement (Adopted by DOE as DOE/EIS-0259, April 1996)	Evaluated alternatives for the disposal of defueled reactor compartments from cruisers and submarines.	The ROD was published in the *Federal Register* on August 9, 1996.	Approximately 100 cruiser and submarine reactor compartments would be disposed of in a 70-ha (173-ac) waste disposal unit in the 200 East Area.	Commits the 200 East Area to Waste Management activities (Industrial-Exclusive use).
Hanford Site Solid (Radioactive and Hazardous) Waste Program Environmental Impact Statement (DOE/EIS-0286) In preparation.	To review ongoing and proposed waste management activities, to implement programmatic RODs that result from the *Final Waste Management Programmatic EIS (DOE/EIS-0200*), and to facilitate decisions on the future operation of Hanford waste treatment, storage, and disposal facilities.	The NOI was published in the *Federal Register* on October 27, 1997. The scoping period closed January 30, 1998. In April 1998, DOE accepted the request of the Yakama Nation that they be co-preparers of the EIS. The Draft EIS is expected sometime in late 1999.	May result in unchanged, minimized, or maximized levels of waste storage, treatment, and disposal of low-level, low-level mixed, transuranic, and hazardous waste and contaminated equipment at Hanford.	Is expected to require continued use of the 200 Areas for Waste Management purposes (Industrial-Exclusive use).
Waste Management Operations, Hanford Reservation, Richland, Washington (ERDA-1538, December 1975)	To provide information for use in planning and decision making to ensure that future waste management practices would be conducted to minimize adverse environmental consequences.	Final EIS issued December 1975. Predates final Council on Environmental Quality (CEQ) NEPA regulations; therefore, ROD not required.	Reassessed the environmental impacts associated with continuing the Hanford Site Waste Management Operations Program to provide information for use in planning and decision making. Addressed waste generated by nuclear defense production, research and development, and other programs and activities at the Hanford Site. The high-level waste preferred alternative was to continue solidifying liquid tank waste to a salt cake form and construct additional double-shell tanks.	Committed portions of the 100, 200, and 300 Areas to continued Waste Management (Industrial-Exclusive use).

Table 1-1. NEPA Reviews Affecting the Hanford Site. (5 pages)

NEPA EISs	Purpose	Status	Potential Mission Impacts on Hanford	Relationship to Land-Use Planning
Bonneville Power Administration Transmission System Vegetation Management Program Draft Environmental Impact Statement (DOE/EIS-0285)	This DEIS establishes Planning Steps for managing vegetation across 24,000 km (15,000mi) of power lines and 350 substations in the northwest.	The Draft EIS was issued August, 1999 and public comment is open until October 9,1999.	Establishes BPA's vegetation management preferences across several areas of the Hanford Site. Noxious weeds and weed corridors are associated with access roads.	Would determine the available vegetation control techniques, herbicides used, and acceptable biological impacts.
Disposal of Decommissioned, Defueled Naval Submarine Reactor Plants (Lead Agency - Department of the Navy; DOE was a Cooperating Agency) (May 1984)	Evaluated disposition of defueled reactor compartments from decommissioned nuclear submarines. (See also DOE/EIS-0259.)	The ROD was published in the *Federal Register* in December 1984.	Land disposal of reactor compartments in the 200 East Areas	Committed the 200 East Area to Waste Management (Industrial-Exclusive use).
Programmatic Environmental Impact Statement for Accomplishing Expanded Civilian Nuclear Energy Research and Development and Isotope Production Missions in the United States, Including the Role of the Fast Flux Test Facility (DOE/EIS-0310)	Would evaluate expansion of FFTF missions.	The Secretary decided on August 18, 1999, that the DOE would conduct a programmatic National Environmental Policy Act (NEPA) review, including an Environmental Impact Statement.	Potential environmental impacts associated with proposed expansion of infrastructure, including the possible role of the FFTF, for civilian nuclear energy research and development activities; production of isotopes for medical, research, and industrial uses; and production of plutonium-238 for use in advanced radioisotope power systems for future NASA space missions.	Proposed FFTF uses are compatible with Industrial or Research and Development land uses.
Hanford Reach of the Columbia River, Comprehensive River Conservation Study and Final Environmental Impact Statement (National Park Service, June 1994)	The Department of the Interior (DOI) and DOE evaluated alternatives for protecting and managing the Hanford Reach and environs of the Columbia River.	The ROD was approved in July 1996. Congressional action is required for the recommended Wild and Scenic River. The proposed National Wildlife Refuge could be established administratively.	Wild and Scenic designation (recreational) would eliminate certain land uses (residential, agricultural, and waste management) within the study area. Establishes wildlife and habitat management access for other areas.	Compatible land uses with the recommendation include: recreation, wildlife, and habitat management for the river corridor and areas north of the river (Low-Intensity Recreation use). Incompatible land uses include: industrial, waste management, agricultural, and grazing.

Table 1-2. SEPA Reviews Affecting the Hanford Site. (2 pages)

SEPA EISs	Purpose	Status	Potential Mission Impact on Hanford	Relationship to Land-Use Planning
Commercial Low-Level Radioactive Waste Disposal Site (U.S. Ecology) on the Hanford Site Environmental Impact Statement - In preparation.	To provide sufficient information to allow state agencies to make the following key decisions: approval of a site closure plan, renewal of the operating license, and an amendment to the regulations limiting the receipt of naturally occurring and accelerator-produced radioactive materials (NARM).	The lead agencies are the Washington Department of Ecology (Ecology) and the Washington Department of Health (DOH). Public scoping - February 1997 through March 27, 1997. A public meeting was held March 5, 1997 at Ecology's office in Kennewick, Washington. Ecology and Health have invited DOE Richland Operations Office (RL) to consult with them on issues, concerns, and potential impacts that should be considered in the EIS. The three agencies met on March 25, 1997, and on April 8, 1997, RL sent a response letter to DOH and Ecology outlining DOE's issues and concerns, and RL's role.	May allow additional amounts of low-level radioactive wastes and NARM to be disposed in the Central Plateau at the privately owned US Ecology site, which was leased by the State from the Federal government.	Expected to continue to require waste management in the 200 Areas (Industrial-Exclusive use).
City of Richland Comprehensive Plan/EIS (August, 1997)	When adopted, the Comprehensive Plan will include the mandated elements on land use, housing, transportation, capital facilities, and utilities, with an optional element on economic development.	The lead agency is the City of Richland. The Final EIS was issued on August 27, 1997.	The City of Richland's Comprehensive Plan is consistent with current and proposed land uses at Hanford and DOE missions.	The City of Richland's Comprehensive Plan addresses land use within the City boundary, and zones land within the City of Richland's urban growth area that extends into the 300 Area of the Hanford Site (Industrial use).
SEPA EIS on Treatment of Low-Level Mixed Wastes (ATG) City of Richland EIS (EA6-97, March 1998)	ATG proposes to build a gasification and vitrification treatment, storage and disposal (TSD) facility in Richland, Washington.	The Final SEPA EIS was issued on March 9, 1998.	Effect of construction and overall operation of the building was evaluated under SEPA. The action would be undertaken as a private action in anticipation of future work for a variety of contracts, including DOE. ATG may proceed with the facility whether or not the Hanford Site low-level mixed waste is included.	A mixed waste TSD facility would be built in an area which is outside of, but in close proximity to the Hanford Site boundary. A TSD facility is a compatible land use under the Heavy Industrial land-use designation in the City of Richland's Comprehensive Plan. The Hanford CLUP does not have a Heavy Industrial land-use designation.

Table 1-2. SEPA Reviews Affecting the Hanford Site. (2 pages)

SEPA EISs	Purpose	Status	Potential Mission Impact on Hanford	Relationship to Land-Use Planning
Draft Benton County Comprehensive Plan (SEPA EIS Addendum) (September 1997)	To revise the Benton County Comprehensive Plan in accordance with the *State Growth Management Act* and SEPA. The Comprehensive Plan is being updated to address land-use planning for all of Benton County, including the portion of the Hanford Site that lies within Benton County. The Comprehensive Plan includes an addendum to the Final SEPA EIS, dated March 1981, prepared for the 1985 Benton County Comprehensive Plan. Detailed planning for the Hanford sub-area was not included in the 1985 plan.	The Final HCP EIS would provide the basis for the Benton County SEPA review for the Hanford sub-area plan of the Benton County Comprehensive Plan. The lead agency is Benton County.	The Benton County Comprehensive Plan will not affect DOE missions at Hanford while DOE retains management of the Site. If, however, land is turned over to state or local governments, such as the Port of Benton, then the stipulations identified in the Benton County Comprehensive Plan would apply. Such transfers might help to fulfill DOE's mission of economic transition and diversification of the local economy.	The Benton County Comprehensive Plan addresses land uses for the County, including the portion of the Hanford Site that lies within Benton County (Industrial, Industrial-Exclusive, Research and Development, High-Intensity Recreation, and Low-Intensity Recreation use). The 1100 Area and 300 Area would remain in an Industrial use designation. The HCP EIS could fulfill the SEPA requirements for the Counties and, as cooperating agencies, they could identify another alternative as their Preferred Alternative.

SEPA = *State Environmental Policy Act of 1971*

Table 1-3. CERCLA Reviews Affecting the Hanford Site.

CERCLA RODs	Purpose	Status	Potential Mission Impact on Hanford	Relationship to Land-Use Planning
1100 Area	Remediation of the 1100 Area and scattered other waste sites still within the southern portion of the Hanford Site.	1100-EM-1, 1100-EM-2, 1100-EM-3, and 1100-IU-1 - Final Record of Decision (ROD) issued September 24, 1993. Certified remedial action - July 1996 Delisted from National Priorities List	1100 Area remediated and available for other compatible uses.	Institutional controls required to prevent disturbance of the asbestos landfill barrier and groundwater. A deed restriction for the Horn Rapids asbestos landfill has been filed with the Benton County Auditor's Office. Industrial-Exclusive equivalent land-use designation.
300 Area	Remediation of the 300 Area	300-FF-1, 300-FF-5 - Final ROD issued July 17, 1996. Remedial Investigation/Feasibility Study (RI/FS) for NPL Site - to be completed after all operable units are addressed.	Remediation would allow industrial use.	Institutional controls required to prevent disturbance of soil below 15 ft and groundwater. Restricted subsurface and groundwater use. Industrial-Exclusive equivalent land-use designation.
100 Area	Remediation of the 100 Areas	100-BC-1, 100-HR-1, and 100-DR-1 - Interim ROD for 37 high-priority waste sites issued September 1995. The ROD was amended May 14, 1997, to include additional waste sites. 100-HR-3/100-KR-4 (Groundwater OUs) - Interim ROD April 1, 1996 100-IU-1, 100-IU-3, 100-IU-4, 100-IU-5 - Interim ROD issued February 12, 1996. RI/FS for NPL Site - to be completed after all operable units are addressed.	100 Areas to be remediated to allow unrestricted residential use: - Unrestricted surface use - Restricted subsurface and groundwater use - Support facilities for groundwater pump-and-treat remediation systems must be maintained.	Institutional controls required to prevent disturbance of soil below 15 feet and groundwater. A deed restriction has been filed for the 183-H Solar Basin RCRA closure with the Benton County Auditor's Office. Industrial-Exclusive equivalent land-use designation. Restricted subsurface and groundwater use.
200 Areas	Remediation of the 200 Areas	Environmental Restoration Disposal Facility - Final ROD issued January 1995. 200-ZP-1 (Groundwater OU) - Interim ROD issued June 5, 1995. 200-UP-1 (Groundwater OU) - Interim ROD issued February 24, 1997. RI/FS for NPL Site - to be completed after all operable units are addressed.	200 Areas to be remediated to industrial-exclusive use. Support facilities for groundwater pump-and-treat remediation systems must be maintained.	Institutional controls required to prevent disturbance of barriers and groundwater. Restricted surface, subsurface, and groundwater use. A deed restriction has been filed for an asbestos trench in the Central Waste Landfill with the Benton County Auditor's Office. Industrial-Exclusive equivalent land-use designation.

1.4 Hanford Site Planning Efforts

1.4.1 Hanford Site Planning Documents

Several Hanford Site planning documents have been developed to address the various information needs of DOE managers. These planning documents are periodically updated to reflect new information and DOE decision making, such as the decision(s) DOE will make based on this Final HCP EIS. Summarized below these planning documents are:

- Draft *Hanford Cultural Resources Management Plan* (CRMP) (DOE-RL 1999)
- Draft *Hanford Biological Resources Management Plan* (BRMaP) (DOE-RL 1996c)
- *Hanford Strategic Plan* (DOE-RL 1996b)
- *Accelerating Cleanup: Paths to Closure at the Hanford Site* (DOE 1998)
- *Hanford Site Ground-Water Protection Management Plan* (DOE-RL 1995c)
- *Management and Integration of Hanford Site Groundwater and Vadose Zone Activities* (DOE-RL 1998).

The CRMP establishes guidance for the identification, evaluation, recordation, curation, and management of archaeological, historic, and traditional cultural resources. The plan specifies methods of consultation with affected Tribes, government agencies, and interested parties; and includes strategies for the preservation and/or curation of representative properties, archives, and objects. This plan is currently being revised with the active participation of affected Tribes and government agencies.

The BRMaP provides DOE and DOE contractors with a consistent approach for protecting biological resources and for monitoring, assessing, and mitigating impacts to biological resources from site development and environmental restoration activities. Primarily, the BRMaP supports DOE's Hanford missions; provides a mechanism for ensuring compliance with laws protecting biological resources; provides a framework for ensuring that appropriate biological resource goals, objectives, and tools are in place to make DOE an effective steward of the Hanford biological resources; and implements an ecosystem management approach for biological resources on the Site. The BRMaP provides a comprehensive direction that specifies DOE biological resource policies, goals, and objectives.

Hanford Strategic Plan

The 1996 *Hanford Strategic Plan* identifies six critical success factors to achieve the Hanford vision and missions. It will be periodically updated.

Protect worker safety and health
- reduce accidents and radiological exposure
- achieve voluntary protection program "star" status

Protect public health and the environment
- reduce or eliminate emissions and effluents
- regulatory and Tri-Party Agreement compliance

Manage Hanford to achieve progress
- projectize Hanford for clear management accountability, responsibility, and authority
- establish and control project baselines
- link key performance measures to results
- maintain a well-trained and qualified workforce

Optimize the Hanford Site infrastructure
- develop cost-competitive infrastructure commensurate with mission needs
- involve staff and community in the outsourcing process

Contribute to economic diversification
- blend economic diversification strategies with all Hanford activities and contractors
- involve local community and leaders in projects

Build and strengthen partnerships for progress
- include American Indian Tribes, regulators, and stakeholders in planning processes
- champion the public's right to know with prompt, accurate information

The *Hanford Strategic Plan* is a planning document that articulates DOE's current vision

and commitments to a long-range strategic direction for the Hanford Site missions (see text box, *"Hanford Strategic Plan"* on previous page). Decisions and actions are made using NEPA, CERCLA, RCRA, and recognized processes as appropriate.

A revision of the *2006 Plan*, the *Accelerating Cleanup: Paths to Closure at the Hanford Site* builds on an already accelerated pace of activities and numerous efficiencies implemented at the Hanford Site during the last few years. It commits to significant cleanup progress on the Site by 2006, while recognizing that much cleanup effort will remain beyond 2006.

The *Hanford Site Ground-Water Protection Management Plan*, and the *Management and Integration of Hanford Site Groundwater and Vadose Zone Activities* documents both provide management and protection guidelines to protect groundwater from radioactive and nonradioactive hazardous substances.

This Final HCP EIS builds on these past planning efforts to address land-use planning at the Hanford Site and presents a range of alternative land uses that represents different visions.

1.4.2 Integrating Planning Efforts by Other Governments and Agencies

This section includes information supplied to DOE by representatives of other governments and agencies about their respective planning efforts. The concept of "agreeing to disagree" on issues such as Tribal members' treaty rights allowed the agencies to set aside differences and work together on the land-use planning process.

1.4.2.1 Tribal Rights. Tribal governments and DOE agree that the Tribal members' treaty-reserved right of taking fish at all "usual and accustomed" places applies to the Hanford Reach of the Columbia River where it passes through Hanford.

Tribal governments and DOE, however, disagree over the applicability of Tribal member's treaty-reserved rights to hunt, gather plants, and pasture livestock on the Hanford Site. The Tribal governments and DOE have decided not to delay completion and implementation of a comprehensive land-use plan for the Hanford Site. Instead, the Tribes and DOE have gone ahead with the land-use planning process while reserving all rights to assert their respective positions regarding treaty rights. Neither the existence of this EIS nor any portion of its contents is intended to have any influence over the resolution of the treaty rights dispute.

1.4.2.2 Other Federal Agencies. In 1943, the USACE began the acquisition of the Hanford Site. Public land managed by the BLM was withdrawn from BLM and placed under DOE control by a land withdrawal order. The BoR land was placed under DOE control by a memorandum of agreement and, finally, land was purchased (sometimes via condemnation) from private owners. Today, DOE continues to manage these acquired lands, which form a checkerboard pattern of underlying ownership over large portions of the Hanford Site (for additional information, see Section 4.1.3).

The BLM and BoR continue to retain an interest in their original property holdings prior to the establishment of the Hanford Site. The DOE must use the land consistent with the purposes for which they were originally acquired from BLM and BoR. Any other use of these lands by DOE requires BLM and BoR involvement. The BLM is responsible for administering Public Domain land. The BoR is responsible for the ultimate development of the irrigable lands within the Wahluke Slope as part of the Columbia Basin Reclamation Project. Both the BLM and BoR have an interest in the Hanford resources and in management of those resources over the long term. When DOE relinquishes its withdrawals on these lands, the BLM and/or BoR would have the right of first refusal to the land. The BLM would examine the lands for current uses and

suitability for return to the Public Domain. Depending upon condition, and after public involvement, suitable lands could be retained and designated for a special protective classification, recreational use, multiple use management, exchange, etc. If unsuitable, then DOE or the Federal General Services Administration (GSA) would have the responsibility to dispose of the land.

In addition to BoR's irrigation system maintenance activities, DOE lands on the Wahluke Slope, have been managed in part by the Washington Department of Fish and Wildlife (WDFW) as the Wahluke State Wildlife Recreation Area and, in part, by the USFWS as the Saddle Mountain National Wildlife Refuge. In April 1999, the WDFW and the USFWS notified the DOE of their intent to modify their management responsibilities on the Wahluke Slope under the 1971 agreement. The USFWS informed the DOE that it intends to allow essentially the same uses permitted by the State of Washington under the WDFW's management of the Wahluke Slope. Therefore, transfer of management of the Wahluke Slope from the WDFW to the USFWS involves only a change in the agency managing the property and does not involve any change in the management activities for the Wahluke Slope. Management of the entire Wahluke Slope by the USFWS as an overlay wildlife refuge is consistent with the 1996 DOI Hanford Reach EIS ROD. The ROD recommended the Wahluke Slope be designated a wildlife refuge and the Hanford Reach a Wild and Scenic River, and that the wildlife refuge be managed by the USFWS.

The USFWS is managing the Fitzner/Eberhardt Arid Lands Ecology Reserve (ALE Reserve) under a cooperative agreement with DOE that was signed on August 27, 1997. The USFWS is currently preparing a Comprehensive Conservation Plan (CCP) (equivalent to an area management plan [AMP]; see Chapter 6) for the ALE Reserve.

Aside from BoR, BLM, and the USFWS current management responsibilities, the U.S. National Park Service (NPS) has, with DOE as a co-preparer, completed an EIS for the Hanford Reach of the Columbia River in 1994. The *Hanford Reach of the Columbia River, Comprehensive River Conservation Study and Final Environmental Impact Statement* (Hanford Reach EIS) (NPS 1994) examines alternatives for preservation of the resources and features of the Hanford Reach (including addition of the Hanford Reach to the National Wild and Scenic Rivers System), and evaluates impacts that could result from various uses of the river. The DOI's ROD (NPS 1996) recommends that the Congress designate federally owned and privately owned lands within 0.4 km (0.25 mi) of the Columbia River, on both banks from river mile 396 to 346.5 as a Recreational River under the Wild and Scenic Rivers System; and that the portion of the Hanford Site that lies north of the river be designated as a National Wildlife Refuge managed by the USFWS. Congress is still contemplating actions that are necessary to implement the DOI's ROD.

In addition to the proposed wild and scenic discussions, other discussions have occurred to transfer administrative jurisdiction over certain parcels of land in the State of Washington from the Secretary of Energy to the Secretary of the Interior, affecting ownership of about 19,943 ha (49,280 ac, 197 km^2, 75 mi^2) of the Hanford Site. This swap would consolidate the scattered Benton County portion of Hanford's BLM Public Domain lands, into an area beginning near 100-D, running south and east along the Columbia River shore, to just north of Energy Northwest (formerly known as WPPSS) and then west to Gable Mountain.

As long as these lands are needed by DOE (i.e., still withdrawn from the BLM by DOE), this legislative action would not affect DOE's administration of the areas involved (see Figure 4-3). The DOE's use of withdrawn BLM Public Domain lands is consistent with most land-use designations with the exceptions of Industrial Exclusive, Research and Development, High-Intensity Recreation, or Industrial designations where BLM's multiple-use mandate would be limited by an extensive infrastructure.

1.4.2.3 Local Governments. Portions of the Hanford Site lie within Benton, Franklin, Adams, and Grant counties. The primary contaminated portion of the Site falls within Benton County, and parts of the Wahluke Slope fall within Franklin, Grant, and Adams counties. The City of Richland abuts the southern boundary of the Hanford Site in Benton County. The City of Richland's urban growth area (UGA) extends into the Hanford Site's 300 Area and considerable development within the city limits and adjacent to the Site has already occurred.

Most planning by local governments falls under the *State of Washington Growth Management Act of 1990* (GMA), which established a statewide planning framework and created roles and responsibilities for planning at the local, regional, and state level. The GMA requires the largest and fastest growing counties (counties with more than 50,000 people or population growth of more than 20 percent in the past 10 years), and cities within those counties to develop new comprehensive plans. Counties not required to plan under the GMA may elect to do so. Benton, Franklin, and Grant counties, along with the City of Richland, have elected to plan under the GMA requirements.

Under the GMA, any county or city that implements the GMA is required to: (1) have the county legislative authority adopt a county-wide planning policy under the *Revised Code of Washington* (RCW) 36.70A.210; (2) have the county and each city located within that county adopt development regulations conserving agricultural lands, forest lands, mineral resource lands, and critical areas which must be designated by the local government within one year of the date the county legislative authority adopts its resolution of intention; (3) have the county designate the UGAs in cooperation with each city under RCW 36.70A.110; and (4) have the county and each city located within the county produce a comprehensive plan and development regulations within four years of the county announcing its intention to plan.

1.4.2.3.1 Benton County. The relationship between DOE and Benton County differs from DOE's relationship to other counties with an interest in Hanford because most of the Hanford Site is located within Benton County. As a cooperating agency, Benton County does not agree with the Tribal view that Hanford lands are "open and unclaimed." Benton County is preparing a comprehensive land-use plan that covers the entire county, which includes a portion of the Hanford Site. The DOE is committed to cooperating with the Benton County's planning effort, per a signed agreement by the Secretary of Energy in March 1996 with local governments, titled *Statement of Principles Outlining the Relationship Between the U.S. Department of Energy and Local Governments* (RL No. 98-089, dated June 1998).

As part of its planning effort, Benton County has developed a proposed critical areas map, which depicts lands identified as critical areas under the GMA (see Figure 1-5). The county has completed its SEPA review of the critical areas map and draft implementing ordinance provisions, which would be amended to the county's adopted Critical Resources Protection Ordinance. The Benton County Planning Commission has reviewed and approved the map and ordinance amendments at public hearings, and has forwarded them to the Board of County Commissioners for action, which is pending. Critical areas include wetlands areas with a critical recharging effect on aquifers used for potable water, fish and wildlife habitat conservation areas, frequently flooded areas, and geologically hazardous areas.

The Port of Benton, which must comply with county land-use plans, has already received the 1100 and 3000 Areas, and has expressed interest in the industrial development of portions of the 300 Area and in the area south of Energy Northwest (formerly known as WPPSS) Plant Number 2.

1.4.2.3.2 City of Richland. The City of Richland plans in coordination with Benton County under the GMA. Richland is greatly influenced by activities at the Hanford Site and has gone through several boom-and-bust cycles in response to employment levels at Hanford. Land

use at Hanford has the potential to affect the economic development of Richland. The city currently provides services such as water, electricity, and sanitary sewers to the southern portion of the Hanford Site. The City of Richland has identified portions of the southern Hanford Site (Figure 1-6) suitable for industrial development and possible annexation.

1.4.2.3.3 Counties of the Wahluke Slope. Franklin, Grant, and Adams counties also contain portions of the Hanford Site. The planning efforts of these local county governments vary by each planning jurisdiction. For example, land-use planning for Grant County reflects the Wahluke 2000 Plan prepared by farming interests in 1992 and supported by Grant County (Figure 1-7). Land-use planning for Franklin County reflects the results from a land-use analysis conducted by the Franklin County Planning Department.

1.4.3 Federal Land-Transfer Procedures

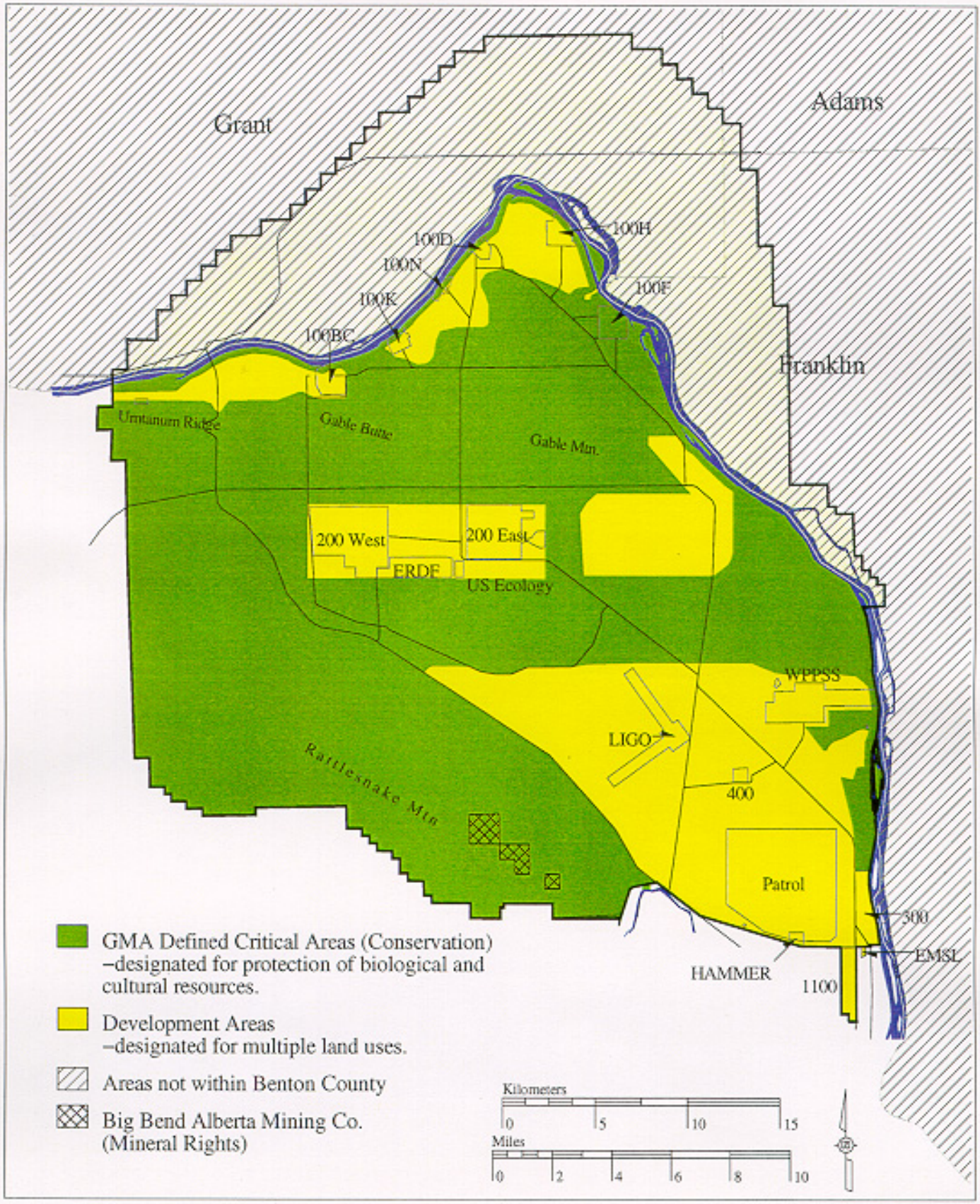
The DOE annually examines its real estate holdings to identify any excess properties. The GSA has developed the following questions for executive agencies such as DOE to consider in identifying valid real property needs (DOE 1997c):

- Is all of the property essential for program requirements?
- Are buffer zones kept to a minimum?
- Can the land be disposed of and program requirements satisfied through reserving rights and interests in the property?
- Is the land being retained merely because it is landlocked?
- Is the land being retained merely because it is considered undesirable due to topographical features or believed to be not disposable?
- Is any portion of the property being retained primarily because the present boundaries are marked by existing fences, roads, and utility systems?

These questions are specifically applicable to purchased land. However, in the absence of other guidance, it is reasonable to apply these same factors when assessing the need for land withdrawn from the Public Domain.

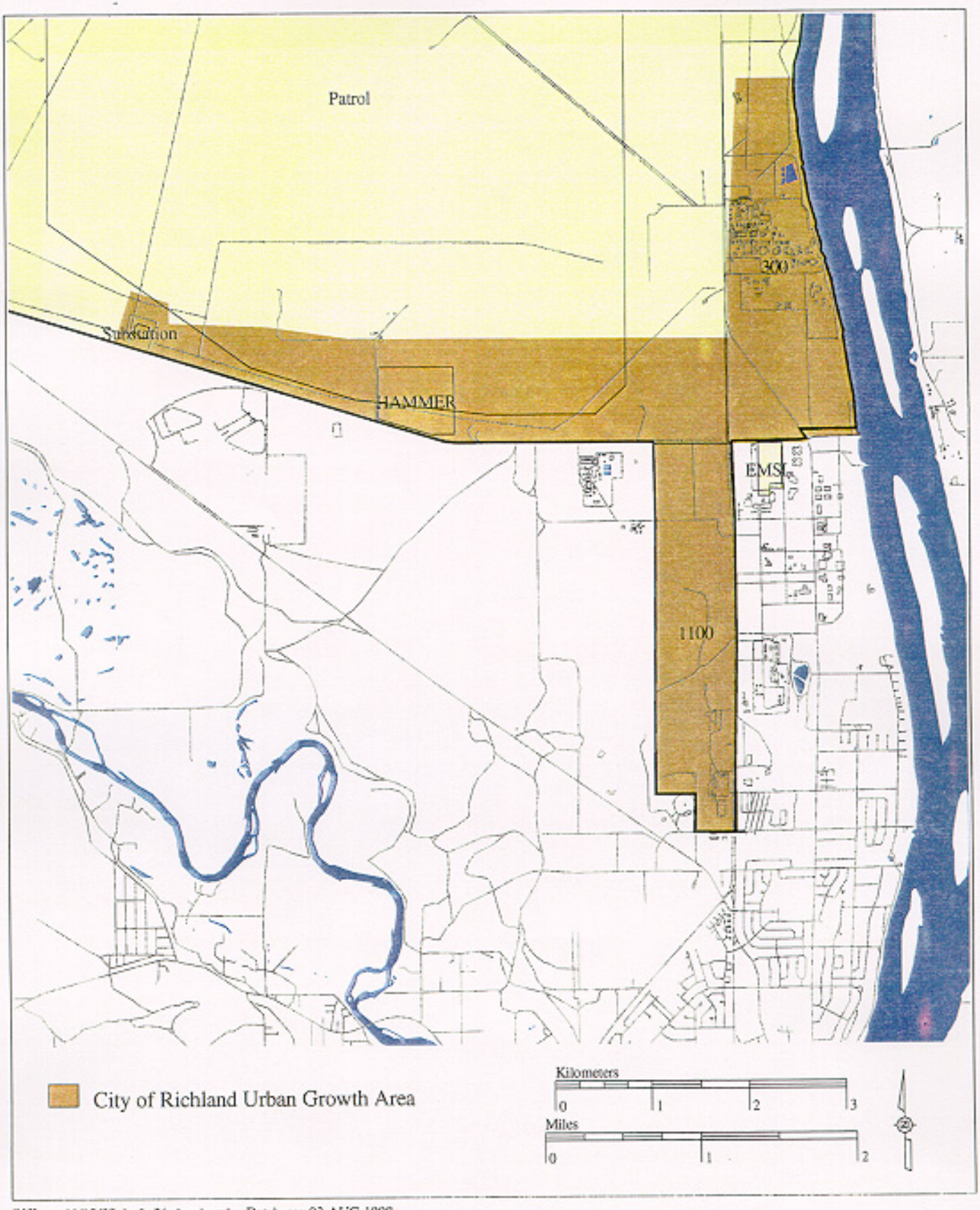
Within the context of Hanford, the CLUP's authority exists only as long as DOE retains legal control of some portion of the real estate. For example, in the Columbia River Corridor, DOE might decide to retain control of the subsurface or groundwater and release only the first 4.6 m (15 ft) of the surface. However, because of the cooperating agencies' involvement in the CLUP process, the CLUP can provide reasonable assurance as to what the land use would be if the land is transferred to the control of one of the cooperating agencies. Further, the creation of a land-use plan through the NEPA process would provide a basis for considering future land transfer proposals. The DOE would conduct appropriate further NEPA review (i.e., EIS, environmental assessment, or categorical exclusion), tiered from this EIS, before making decisions on any specific future land-transfer proposals.

Figure 1-5. Benton County Proposed Critical Areas Map.



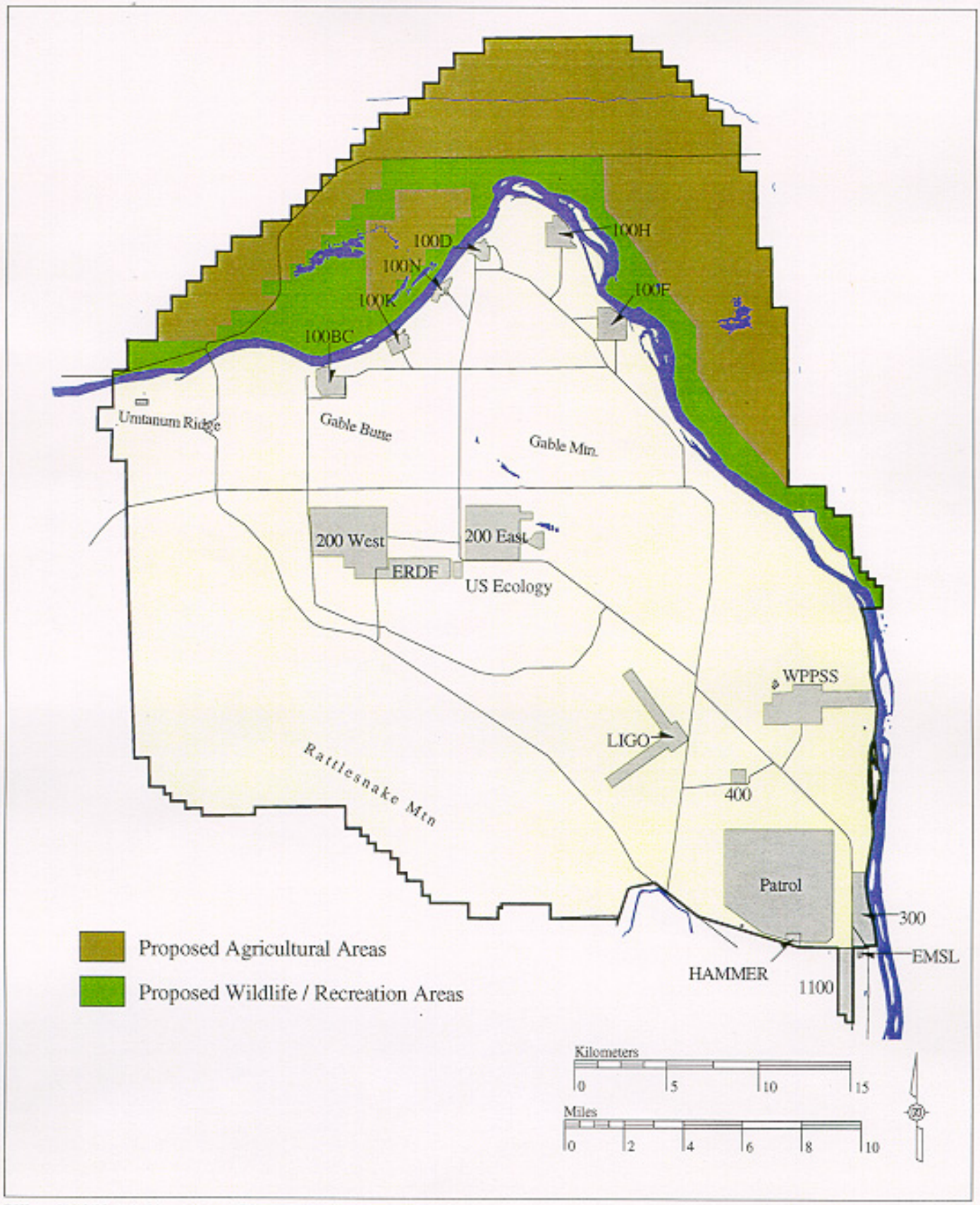
BHI:rpp 04/23/96 clup/bentonco1.aml Database: 03-AUG-1998

Figure 1-6. City of Richland Urban Growth Area.



BH:rpp 01/13/98 draft_2/urban1.aml Database: 03-AUG-1998

Figure 1-7. Wahluke 2000 Plan Map.



BHE:rpp 01/13/98 draft_2/urban4.aml Database: 03-AUG-1998

In its NEPA regulations (10 CFR 1021), DOE has identified several categorical exclusions of typical classes of action relevant to land transfers that normally do not require an EIS or an environmental assessment. As described in 10 CFR 1021.410, to find that a proposal may be categorically excluded, DOE must determine that the proposal fits within the class of action (see text box, "*DOE's Land Transfer CXs*") that there are no extraordinary circumstances that may affect the significance of the proposal (e.g., "... unresolved conflicts regarding alternate uses of available resources..."), and that the proposal is not connected to other actions with potentially significant impacts. Departmental policy requires field activities to identify long-term mission needs and rationally plan for future site development. More specifically, policy requires that comprehensive land-use plans be developed based on mission needs, site and regional conditions, strategic goals, and other technical information such as the need for buffer zones. Also, disposals are made through the Department's certified realty specialists at field sites in accordance with statutory and regulatory requirements. This CLUP's authority is limited to as long as DOE retains legal control of some portion of the real estate.

DOE's Land Transfer CXs

A.7 Transfer, lease, disposition, or acquisition of interests in personal property (e.g., equipment and materials) or real property (e.g., permanent structures and land), if property use is to remain unchanged; i.e., the type and magnitude of impacts would remain essentially the same.

B1.24 Transfer, lease, disposition or acquisition of interests in uncontaminated permanent or temporary structures, equipment therein, and only land that is necessary for use of the transferred structures and equipment, for residential, commercial, or industrial uses (including, but not limited to, office space, warehouses, equipment storage facilities) where, under reasonably foreseeable uses, there would not be any lessening in quality, or increases in volumes, concentrations, or discharge rates, of wastes, air emissions, or water effluents, and environmental impacts would generally be similar to those before the transfer, lease, disposition, or acquisition of interests. Uncontaminated means that there would be no potential for release of substances at a level, or in a form, that would pose a threat to public health or the environment.

B1.25 Transfer, lease, disposition or acquisition of interests in uncontaminated land for habitat preservation or wildlife management, and only associated buildings that support these purposes. Uncontaminated means that there would be no potential for release of substances at a level, or in a form, that would pose a threat to public health or the environment.

This EIS does not contain any new mechanisms or preferences regarding the transfer of land, but with the input from the cooperating agencies and consulting Tribal governments, this EIS would continue to be useful for considering proposals regarding Hanford lands that might be transferred beyond the control of DOE. This EIS is not focused on land transfer, but instead focuses on the integrated use and management of land and resources independent of who owns the land. Land transfer is a complicated and separate process from the CLUP and, once property leaves DOE control, DOE has no control over the use of that land unless the property was conveyed with deed or other legal restrictions. For more information about regulations pertaining to land transfer or facility leasing, see Table 1-4. For more information about the process for transferring property, refer to the guidebook, *Cross-Cut Guidance on Environmental Requirements for DOE Real Property Transfers* (DOE 1997b), or Ecology's guidebook, *Hanford Land Transfer* (Ecology 1993).

Table 1-4. Regulations Affecting Land Transfer. (3 pages)

Year	Law	Name	Mechanism	Term	Approvals	Major Elements
1954	PL 83-703, Sec. 161(g)	*Atomic Energy Act* (AEA)	**S** Lease Real Property **S** Lease Personal Property **S** Sell Real Property **S** Sell Personal Property	Not specified	Sec. of Energy approval delegated to field offices	**S** General authority to sell, lease, grant, and dispose of real and personal property. (There must be a direct correlation between the purpose of the lease and the mission of DOE derived from the AEA.) **S** Limited to R&D efforts or efforts to support atomic energy, or efforts to support international agreements
1955	PL 221-Chapter 543: 69 STAT 471, as amended 1964 (PL 88-394); (US Code 42 U.S.C. 2349)	*Atomic Energy Community Act*	**S** Lease Land **S** Lease Equipment **S** Sell Equipment	Not specified	Sec. of Energy approval Congressional Review	**S** Applies to Hanford Site only **S** Must obtain fair market value **S** Congress has 45 day review **S** Must reduce adverse economic impact in local area
1977	PL 95-91, 91 STAT 565, as amended, 42 U.S.C. 701 et. seq., August 4, 1977	*Energy Organization Act*	Lease Real Property	5 years	Local DOE field office authority for approval established under DOE Order 4300.1C	**S** Not currently needed, but not yet excessed **S** Does not require fair market value, but implementing DOE Order 4300.1C does require fair market value
1948	PL 80-537	Authorizing the transfer of certain property for wildlife, or other purposes	Transfer of excess	Not specified	General Services Administration	Upon application to GSA, the Secretary of the Interior is authorized to accept transfer of federally excessed land that has value for migratory birds without compensating the excessing agency.
1954	43 U.S.C. Section 931c, Chapter 22	*Public Lands Authorization for Certain Uses*	Lease Land	30 years	Secretary or designee	**S** DOE must have authority over land **S** Fair market value must be received **S** Can only lease to states, counties, cities, towns, townships, municipal corporations, or other public agencies for the purpose of construction and maintaining on such lands, public buildings or other public works

Table 1-4. Regulations Affecting Land Transfer. (3 pages)

Year	Law	Name	Mechanism	Term	Approvals	Major Elements
1980	PL 96-480	*Stephen-Wydler Technology Innovation Act*	**S** Technology Transfer **S** Cooperative Research Agreements **S** Licensing	N/A	Local DOE field office authority	**S** Established technology transfer as a mission of the Federal government
1949	Chapter 288, 63 STAT 377 40 U.S.C. 471 et. seq.	*Federal Property and Administrative Services Act of 1949*, as amended				
1994	PL 103-251, 15 USCA 3710a	*Cooperative Research & Development Agreements* (CRADA)	**S** Land Use **S** Facility Use **S** Equipment Transfer	5 years	Local DOE field office authority	**S** Must be joint effort between one or more government laboratories and one or more non-Federal parties **S** Work scope must be research and development **S** Special consideration to small businesses **S** Both parties can provide people, services, facilities, equipment, intellectual property, and other resources, except government cannot provide cash

Table 1-4. Regulations Affecting Land Transfer. (3 pages)

Year	Law	Name	Mechanism	Term	Approvals	Major Elements
1994	PL 103-160, Sec 3154, 3155	*Defense Authorization Act* (Hall Amendment)	Section 3154: **S** Lease Real Property and related personal property	Section 3154: 10 years - option for additional term (unspecified)	Section 3154: **S** Requires Secretary approval or designee plus administrator of EPA for NPL Site or appropriate state official. State official has 60 days to reject request for concurrence	Section 3154: **S** Located at DOE facility to be closed or reconfigured **S** Not needed by DOE **S** Under DOE's control **S** Must be acquired land, not Public Domain land **S** Can be leased for less than fair market value **S** Lease revenues can be used at the Site generating the revenues.
			Section 3155: **S** Transfer Personal Property		Section 3155: **S** Secretary or designee approval required	Section 3155: **S** Can be used if transfer mitigates adverse economic consequences that might otherwise arise from the closure of the facility **S** Equipment must be located at the facility to be closed **S** Must be excess to DOE needs **S** Must cost more than 110% of new cost to relocate if needed elsewhere in DOE **S** Consideration received may be less than fair market value **S** Additional terms may be required that Secretary deems necessary to protect U.S. interests

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